

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.9422
N2In25



INDUSTRIAL FEEDING FACILITIES

WAR FOOD ADMINISTRATION
Office of Distribution
Washington, D.C.

UNITED STATES
DEPARTMENT OF AGRICULTURE
LIBRARY



BOOK NUMBER 1.9422
N2In25

514867

c 30 8-7671

FOREWORD

The primary objective of any Industrial Feeding Program should be to protect and improve the nutritional status and, therefore, the health of workers.

This manual has been prepared to assist in reaching that objective. Basic planning principles are presented and illustrated with design charts, standard lay-outs, and equipment lists.

Industrial feeding problems vary from those of commercial establishments in many respects. Old formulae and systems frequently fall short of satisfactorily meeting industrial feeding conditions. Makeshift arrangements rarely achieve the desired result.

Experience has shown that food is better prepared, retains more nutritive value, and appears more appetizing if equipment is placed in relation to a logical flow of production. The layouts contained herein were designed with this principle in mind.

Standard lay-outs cannot be developed to meet all possible conditions. There will be instances where a recommended plan cannot be used without some modification. This manual will be of most practical use if employed as a yardstick or general guide in planning. By reference to the recommended plan that most nearly approaches the general requirements, adequacy and logic in arrangement of old or new facilities can be easily appraised.

The Industrial Feeding Facilities Manual is devoted entirely to the field of technical planning; however, it is important to note that the ultimate success of an in-plant feeding service depends upon its acceptance by the employees. In discussions relating to the planning of facilities, it is a wise procedure for plant management to include a committee representing the employees.

The material for this publication was developed by Erwin G. Adelberger, Ivon H. Blackman, Jr., and Ruth M. Lusby of the Civilian Food Requirements Branch, Office of Distribution, War Food Administration.



Robert S. Goodhart, Surgeon (R) USPHS
Chief, Industrial Feeding Programs Division
Civilian Food Requirements Branch

WAR FOOD ADMINISTRATION
Office of Distribution
Washington, D. C.

INDUSTRIAL FEEDING FACILITIES

TABLE OF CONTENTS

Introduction	
Part I	Selection of Facilities
Part II	Lay-out Design and Construction
Section 1	Lay-out of Facilities
Section 2	Space Determinations
Part III	List of Different Types of Facilities Used in War Food Administration Industrial Feeding Program
Part IV	Commissaries
Part V	Central Kitchens
Part VI	Industrial Cafeterias
Part VII	Lunch Counters
Part VIII	Stationary Fast Service Units
Part IX	Lunch Stands
Part X	Stationary Canteens
Part XI	Mobile Units
Part XII	Shelters

INTRODUCTION

This manual has been prepared in loose-leaf form to allow for expansion and revision. It is divided into parts.

Part I covers the technical considerations in the selection of facilities.

Part II is devoted to lay-out, design, and construction. It is divided into sections, each one covering a particular subject.

Drawings and charts illustrating the various topics in Parts I and II are designated Series D. D. (Design Data). Should supplementary drawings be issued on any subject, a decimal will be introduced so that the drawings can be kept in sequence. For example, should sheet 1 of Series D. D. be augmented by another drawing, it would be numbered sheet 1.1, etc.

As new subjects are added to Part II they will be given new section numbers.

Part III is a dictionary of technical terms used. It includes a system of coding for the various types of facilities.

The remaining parts refer to specific types of facilities. Supplementary data prepared for these parts will consist of equipment lists, standard plans, and details. They will be given part numbers and be coded according to the particular classification in which they fall.

SELECTION OF FACILITIES

Sheet 1, Series D. D. shows in flow chart form the progressive relationship of the various factors which determine the most suitable types of facilities for any given plant.

The total number of meals to be prepared, the meal pattern, length and number of lunch periods, plant area and distribution of employees, and finances are basic factors in determining the requirements for any industrial feeding installation, regardless of the size of the plant.

"Total Number of Meals to be Prepared" may be determined in some instances by taking a poll of the workers themselves. Where this is not possible or where a plant is in the design stage, a figure representing 80 per cent of the total number of employees may be used. This percentage has been found to be a safe average. In regard to the "Meal Pattern," generally about 60 per cent of the workers patronizing a food service take complete meals and about ~~25~~ 40 per cent use the facilities to supplement their home-packed lunches. These percentages are applicable to both the "Total Number of Meals to be Prepared" and "Number of Meals at Peak Load." Usually the "Number of Meals at Peak Load" is the number to be served during the largest shift.

The "Meal Pattern" includes the meals to be served through a 24-hour period and the menus for each. The meals may be breakfasts, complete lunches, and/or supplementary items such as sandwiches, milk, coffee, orange juice, etc., between meal refreshments, and dinners. When the "Meal Pattern" has been established and related to the "Total Number of Meals to be Prepared," the "Amount of Food Required" can be determined.

Knowledge of food delivery schedules and purchasing policies and the market situation is a requisite to the planning of adequate storage space.

The "Amount of Preparation Equipment Required" can be determined only after the "Number of Meals at Peak Load" and the "Meal Pattern" have been established.

The "Length and Number of Lunch Periods" and the "Number of People to be Seated at Peak Load" determine seating requirements.

Each worker should be allowed at least 15 minutes for eating. This does not mean that the lunch period should be only 15 minutes. It must be long enough to allow the worker time to clean up and travel from his work area to the eating facility and return, and still permit him 15 minutes for eating. In most instances an over-all period of 30 minutes will be required.

The amount of seating space and serving facilities may be kept at a minimum by staggering lunch periods. If there is but one 30-minute

WFA
Office of Distribution

lunch period for all workers on the largest shift, seating space has to be large enough to accomodate everyone at once and comparable serving facilities must be provided. By staggering periods in two or three successive or overlapping periods, the seating and serving facility requirements can be decreased. For example, a plant feeding 2,000 workers would require seating space for 2,000 people if everyone were served at one time. The use of two staggered lunch periods would reduce the seating requirements by approximately one-half. If four staggered periods were used, only 500 workers need be seated at one time, resulting in a corresponding reduction in seating area. Also, the services of the food service employees would be utilized over a longer period of time and the smaller facilities would require less labor for maintenance.

The "Plant Area and Distribution of Workers" combined with the foregoing factors establishes the distribution of the feeding facilities.

When a plant covers a wide area with corresponding dispersion of workers, a decentralized service may be desirable. If decentralized service is determined upon, further analysis of the distribution of workers is necessary to decide whether central preparation (Central Kitchen) or decentralized preparation (Commissary) is indicated. Both may function in conjunction with any one or several of the various types of decentralized services such as Stationary Fast Service Units, Stationary Canteens, Lunch Stands, Mobile Units, etc. The interrelation of these serving units is shown on D. D. Sheet Number 1.

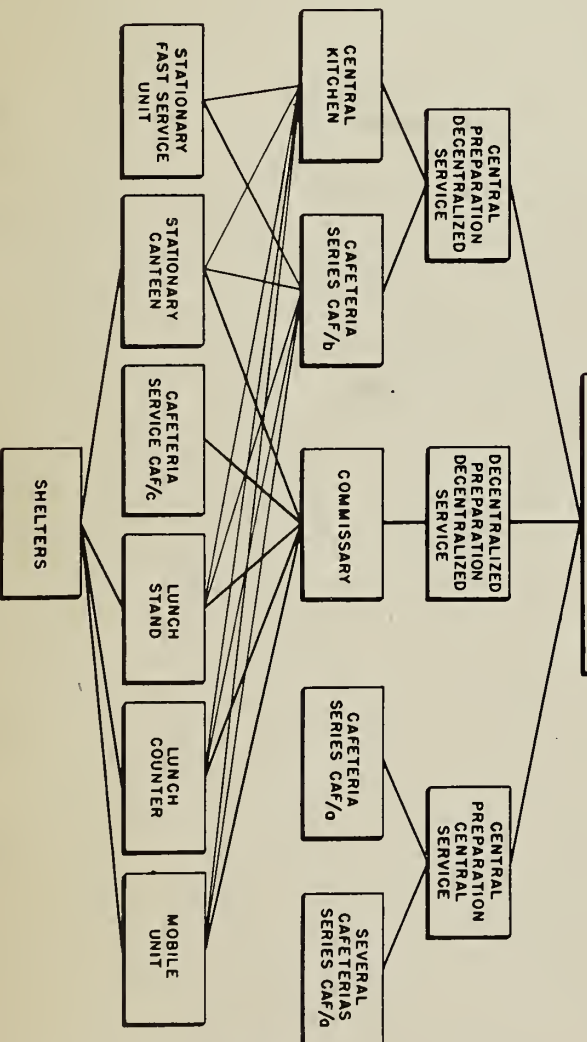
A compact plant may be served best with a centralized type of food service such as the self-contained cafeteria, Series CAF/a. There may be cases where a large plant is arranged in such a manner that several Series CAF/a cafeterias could be used. In other cases the efficiency of the food service might be improved by using Lunch Counters, Canteens, Mobile Units, etc., in conjunction with a self-contained cafeteria. In such instances the kitchen of the self-contained cafeteria becomes a central kitchen for the auxiliary serving units. On the chart D. D. Sheet 1, this type of cafeteria is indicated as Series "CAF/b, Central Preparation, Decentralized Service."

In all cases most careful study should be given to the plant area and distribution of workers and the time needed for travel between the work and serving units. A thorough investigation should be made of the possibilities offered in combining the various types of food services before final determinations are made.

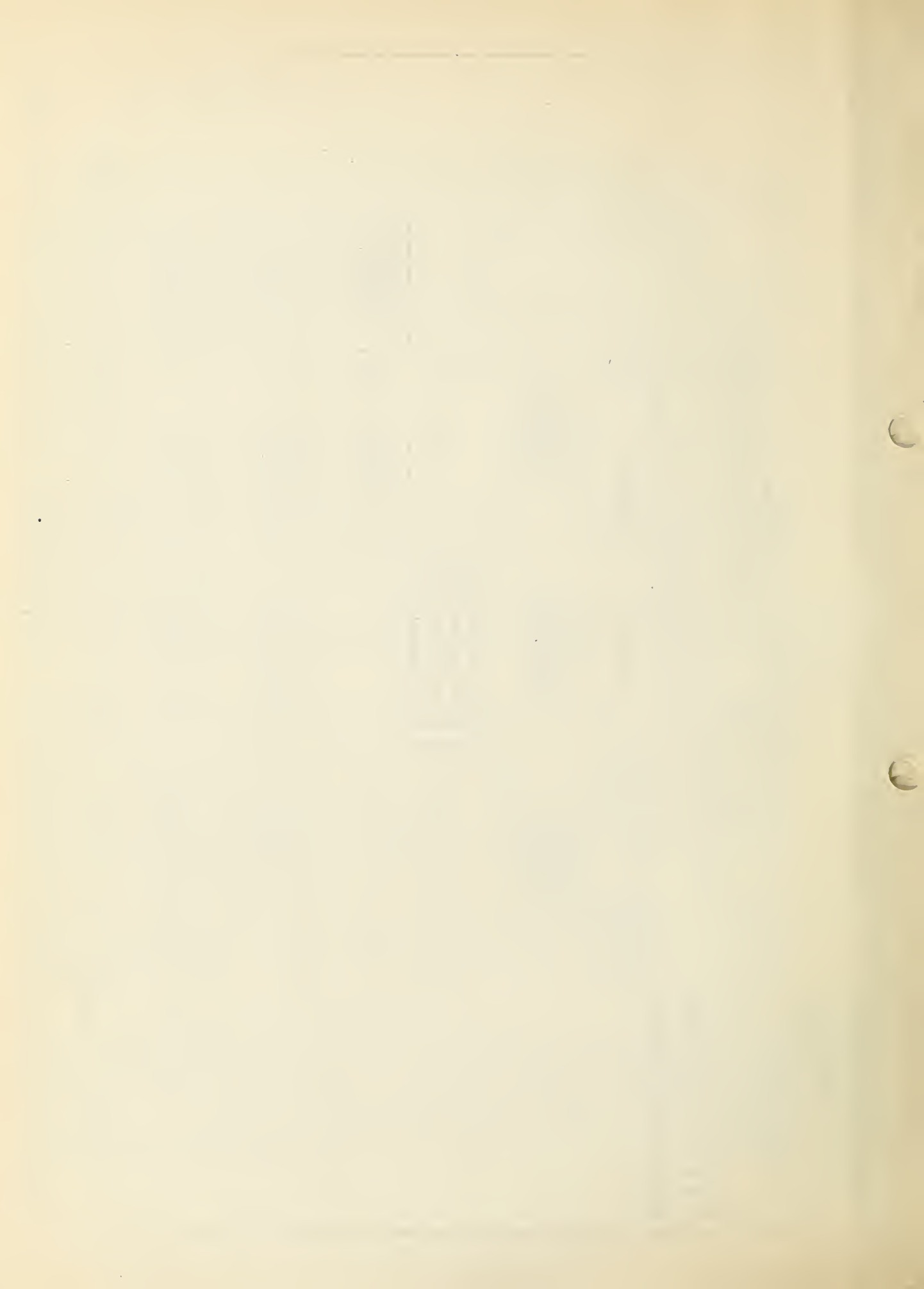
The term "Finances" means the capital investment. The amount of money available for feeding facilities is frequently decided upon in advance of actual selection and planning. It is important that the preconceived capital investment should not be allowed to become the determining factor in selecting the type of food service. The service then may be scaled down to an unsatisfactory minimum and the objective, of protecting and improving the nutritional status of the worker, lost.

```

graph LR
    A[TOTAL NO. OF MEALS TO BE PREPARED] --> B[MEAL PATTERN]
    A --> C[NUMBER OF MEALS AT PEAK LOAD]
    B --> D[AMOUNT OF FOOD REQUIRED DELIVERY SCHEDULES]
    B --> E[LENGTH AND NUMBER OF LUNCH PERIODS]
    C --> D
    C --> F[AMOUNT OF PREPARATION EQUIPMENT]
    C --> G[AMOUNT OF STORAGE SPACE]
    D --> H[NO OF PEOPLE TO BE SEATED AT PEAK LOAD]
    D --> I[REQUIREMENTS FOR INDUSTRIAL]
    E --> H
    E --> J[PLANT AREA & DISTRIBUTION OF PEOPLE]
    H --> I
    H --> K[DISTRIBUTION OF FEEDING FACILITIES]
    J --> K
    J --> L[FINANCES]
    I --> L
  
```



INDUSTRIAL FEEDING FACILITIES MANUAL	
DESIGN DATA	
SERIES	TITLE OF SHEET
D.D.	BASIC FACTORS GOVERNING SELECTION & DESIGN OF INDUSTRIAL FEEDING FACILITIES
9-234	SHEET NO. 1



WFA

Office of Distribution

The food service should be considered an integral part of the general plant lay-out. Specifications for the complete food services should be given to the architect or engineer along with general plant requirements.

LAY-OUT DESIGN AND CONSTRUCTION

Lay-out of Facilities

The preparation of food is a production process. Individual work units should be planned in relation to the sequence of food production and service operations. By so doing, food production can approach the smoothness of an industrial assembly line.

The Food Production Flow Chart, Series D. D., Sheet 2, shows a logical progression of operations and indicates fundamental principles in planning food service units.

In laying out kitchens, the ability to control the entire food production operation should be kept uppermost in mind.

Supervisory control of food supplies reduces waste and spoilage, increases production, helps maintain sanitary standards, and improves the quality of the end product.

Such control is the responsibility of the kitchen manager. His office should be so placed that he can directly control receiving, storage, and kitchen areas and his supervision should be extended to cover the serving and dining area, if possible. Such an arrangement may not be accomplished easily but it is worth obtaining if the balance of the plan will permit.

The kitchen plan should be so coordinated that supplies will move from receiving area to storage rooms without traversing food production areas. Work units for rough preparation, such as vegetable cleaning and meat cutting, should be so placed that materials move in sequence from storage areas to cooking areas with a minimum of cross traffic and lost motion.

Individual work units in cafeteria kitchens should be free of enclosing walls, except around bake shops. Where operations are closely inter-related, partitions tend to set up barriers to fast production and make supervision difficult. Walls or partitions with a generous amount of glass are recommended around bake shops in order to keep the flour dust within the bake shop area. It is recommended that both commissaries and central kitchens be divided into rooms according to the number of specialized operations carried on independently.

Refrigerators of the walk-in type should be divided into three or four rooms and be equipped with individual thermostatic controls to regulate the temperatures according to type of supplies stored. It is recommended that vegetables and fruits be stored at temperatures from 40 to 45 degrees F.; dairy products at about 40 degrees F.; meats, 33 to 38 degrees F.; and frozen foods from 0 to 10 degrees above zero F. Adequate

WFA
Office of Distribution

room, easily ventilated and accessible from space other than that used for food storage, should be allowed for refrigeration machinery. Where chipped ice is used in large quantities, special storage space should be furnished.

A separate refrigerator should be provided for the storage of fish and fish products. When operations are on a small scale, the fish box may be simply an ice chest; for larger operations, a separate reach-in refrigerator may be set aside for this purpose. In some cases the walk-in refrigerator may be partitioned to provide an efficient reach-in box for fish storage, accessible from the kitchen.

Sufficient refrigeration space for each preparation and serving unit should be provided. Departments such as the bake shop and kitchen, and the salad and sandwich sections require reach-in refrigerators for holding daily supplies and cooked foods.

The refrigerator in the cafeteria salad and sandwich department should be placed in the wall dividing the kitchen from the cafeteria, directly back of the serving section of the counter, and should be of the reach-through type (doors on both faces). With this arrangement the food will retain its crispness and many steps will be saved in moving salads and sandwiches to the point of service. Where there are several counter service units, this arrangement may be impossible. The accessibility of the preparation departments to the service units is a major consideration in planning lay-outs.

Cafeteria service counters require special refrigeration units for such supplies as milk, fruits, and desserts. The type of unit used depends upon the counter arrangement.

Refrigerated counters for salads, fruits, and beverages are also necessary. These may be chilled by mechanical refrigeration coils or they may be counter compartments, constructed to hold crushed ice.

Locker and toilet rooms for both men and women are essential to every kitchen or preparation unit. They should be located so that kitchen personnel can enter directly into the locker rooms to wash and change into uniforms before going to the work units. The toilet rooms should be provided with an adequate number of water closets and lavatories with hot and cold water. Shower stalls with necessary drying and dressing space should be installed, even when operations are on a small scale. Toilet and locker rooms should never be adjacent to food storage areas and should never open directly into the kitchen. They should be provided with ample ventilation, either with windows opening directly outdoors or with a properly sized mechanical system of forced air removal.

Reference should be made to the following:

WFA
Office of Distribution

Safety Code for Industrial Sanitation in Manufacturing Establishments, American Standards Code Z4.1, American Standards Association, New York, N. Y.

Washing and Toilet Facilities for Women in Industry. Special Bulletin Number 4. U. S. Department of Labor Women's Bureau.

The Installation and Maintenance of Toilet Facilities in Places of Employment. Bulletin of the Women's Bureau, Number 99, U. S. Department of Labor.

Hand sinks should be installed at all food preparation and serving units as a further aid to the maintenance of sanitary standards. They should be placed conveniently to discourage employees washing their hands in food sinks.

All aspects of the counter service should be studied carefully to eliminate possible bottlenecks. One of the main considerations in industrial feeding is rapid service. Long counters result in slow service. Consequently, several short counters from 15 to 18 feet in length, combined with limited menu choice, are recommended. These short counters do not include space for coffee dispensing and for the cashier. It has been found advantageous to have these operations carried on at points away from the serving counter.

There are several systems of checking and paying for the food. Each one should be carefully analyzed and the one that provides for greatest speed selected.

If menu boards are prominently placed so that the diners can make their choices before entering the line or reaching the serving counters, it will contribute to faster service.

The dining room should be planned so that customers can line up at the service counters, take trays to the tables, and leave the dining room without interfering with diners and with the service traffic. Aisles or corridors should be so placed that workers may line up under shelter.

Dining rooms should provide a pleasant environment where employees can relax and enjoy social contacts. They should be attractively decorated, adequately lighted, well ventilated, and soundproofed against outside and inside noise. Comfortable chairs are to be preferred to benches or tables with attached seats. Dining rooms can be equipped with public address systems for plant announcements, music, and nutrition education programs. Rooms that are to be used for both dining and social functions should be planned accordingly.

There are two ways of returning soiled dishes to the scullery; either the customer carries his own dishes there, or the job is done by bus boys.

If a system of self-bussing is used, the scullery should be located near the exits, or conveyors may be installed along the dining room walls.

Ample space should be allowed for the dishwashing room or scullery. Estimates should be made of the number of dishes that will come out at peak hours and the speed with which they can be put back into service. Sufficient table and shelf space should be available for scraping, stacking, and feeding dishes into the dishwashing machines. Space for handling, washing, and sterilizing glasses should be included. Delays in the dishwashing department during the lunch period will seriously handicap the operation of the cafeteria.

A steam booster on the dishwashing machine may be necessary in order to provide water of the proper temperature (at least 170° F.) for rinsing the dishes.

Provision should be made for precleaning soiled dishes before they go into the dish water. This may be accomplished by connecting a hose and drain near the scraping section. In lieu of the hose and drain connections, a sink may be provided for the prewash. Dishwashing runways at both the soiled-dish and clean-dish sections should be sloped and furnished with drains to carry off excess liquids. Shelves under the runways should be provided for storing dish baskets.

The following is an excerpt from Public Health Bulletin Number 280, "Ordinance and Code Regulating Eating and Drinking Establishments," recommended by the United States Public Health Service, 1943.

"...it seems to be fairly well established that the wash water temperature should be approximately 140° F. (but not higher, because food particles would then be 'cooked' onto the utensils), and in no case lower than 120° F. (because then fats would not be emulsified); and that the rinse water temperature should be at least 170° F.

Dishwashing machines must be kept clean. The pumps and the wash and rinse sprays or jets, if any, should be so designed that a forceful stream of water will reach all of the utensils when they are properly racked. Periodic inspection and cleaning of wash and rinse sprays are essential to continued satisfactory operation, and these parts of the machines should, therefore, be readily accessible for inspection and cleaning. The wash tank water should be changed during operation as often as is found necessary to keep it reasonably clean. An effective concentration of detergent should be maintained at all times. The inspector should urge that dishwashing machines be provided with: (1) properly operating automatic detergent dispensers; (2) thermostatic control of the temperature of the wash water as well as that of the rinse water; and (3) thermometers in both the wash and rinse water lines and in such a location as to be readily visible. Adequate hot water heating and storage facilities are essential."

Garbage and trash collection rooms should be separated from food storage areas. They should be constructed of durable, washable and sanitary materials. No floor drains should be used unless they are of the rodent control type. The floors should be sloped to drain so that the rooms can be scrubbed and hosed. The garbage room should be refrigerated. All garbage should be kept in tight, nonabsorbent, and easily washable receptacles and be covered with close-fitting lids. Hose connections should be provided for hot and cold water and steam to be used for cleaning and sterilizing garbage cans and rooms.

CHART FOR CHECKING
ADEQUACY OF FACILITIES AND EQUIPMENT

Control unit, overseeing -	Receiving Supplies to work units Shipping Food preparation units Personnel entrance Serving and dining room areas
Storage areas: Refrigerated -	Adequacy (shelving) Location related to work units Temperature Ease in cleaning walk-in boxes
Dry -	Adequacy (shelving) Location related to work units Temperature
Work units	Arranged for production flow absence of cross traffic and interference Adequacy (type, size, and number of pieces of equipment)
Serving facilities (counters, etc.)	Adequate for number of persons to be served Arranged for speed of service Cashier (advantageously located) Menu boards (placement and readability)
Seating area	Adequate for number of persons seated Shelter for waiting lines (absence of cross traffic) Appearance (comfort, cleanliness, and pleasant interior) Noise level Self-bussing of dishes
Dishwashing	Adequate equipment Temperature of water (approximately 140° for washing) (not less than 170° for rinsing) Cleanliness
Garbage and trash collection	Separate rooms each for garbage and trash Ease in cleaning garbage and trash rooms Provisions for washing and sterilizing garbage containers

WFA
Office of Distribution

Garbage and trash collection (continued)	Direct disposal from premises. Garbage and trash should not be carried through kitchen or other parts of building for final disposal.
Kitchen personnel	Entrance to locker rooms. (Kitchen personnel should be able to enter locker rooms before entering kitchen.) Locker rooms for men and women Toilet rooms for men and women Adequacy of lavatories water closets showers hot and cold water
Floors	Impervious to grease and moisture Sanitary corners and cove base Ease in cleaning Adequate drainage, especially at steam equipment Nonslip surfaces
Lighting	Diffused general lighting Adequate direct light for work units and serving units Shading of individual bulbs
Screens	On windows doors garbage storage trash storage
Ventilation	Of dining room serving area kitchen area Hoods over steam, cooking, baking, and dishwashing equipment

Space Determinations

A single coefficient of 20 or 22 square feet per person seated is in common usage to determine the total area required for feeding facilities. This figure is not applicable to industrial feeding, where workers arrive at serving units in sudden and concentrated numbers. To render the most efficient service, the food production, serving, and seating facilities have to be sized to cope with this particular type of traffic. It is also important that workers be sheltered upon their arrival at the feeding unit, instead of being permitted to form in lines outdoors.

These factors make it impossible to use one over-all figure or coefficient. Kitchen and seating areas have to be considered separately. The size of the kitchen is determined by the number of meals to be prepared at peak load, while the amount of seating area is determined by the number of persons to be seated at one time. It has been found that as the peak meal load on a kitchen increases, the coefficient (square feet per meal) decreases. (See "Table of Cafeteria Kitchen Area Coefficients Based on Meal Load," Part II, Section 2, Page 3.

The coefficient for the seating area (square feet per person seated) remains constant under average conditions. A coefficient of 17 square feet per person to be seated will provide adequate space for seating, aisles, dishwashing unit, serving counters, and the space behind the counters.

The following is an example:

If a kitchen meal load is 1,200 meals to be served through a 1-hour period, a definite amount of space will be required to house the equipment for preparation. If the serving period is restricted, the meal load on the kitchen remains essentially the same regardless of whether 1,200 people will be seated at one time or 400 through three successive lunch periods. Therefore, if the total area requirements for the feeding operation were to be computed on the basis of 400 people to be seated and a single coefficient were used, the kitchen would suffer a drastic reduction in space and would be inadequate for the job. By using a separate coefficient for the kitchen area based on the meal load only, there would be no question as to adequacy. By using a separate coefficient for the seating area, the proper amount of space for aisles, serving, seating, etc., likewise would be provided.

WFA
Office of Distribution

For example:

Kitchen meal load 1,200
Coefficient 3 sq. ft., total kitchen area 3,600 sq. ft.

Dining room seating 1,200
Coefficient 17 sq. ft. per person seated
Total dining room area 20,400 sq. ft.

Dining room seating 400
Coefficient 17 sq. ft. per person seated
Total dining room area 6,800 sq. ft.

Table of Cafeteria Kitchen Area Coefficients
Based on Meal Loads^{1/}

<u>Meal load</u>	<u>Base figure</u>	<u>Coefficient square feet</u>
100 - 200	200	5.00
200 - 400	400	4.00
400 - 800	800	3.50
800 - 1300	1000	3.00
1300 - 2000	2000	2.50
2000 - 3000	3000	2.00
3000 - 5000	5000	1.85
5000 - 8000	8000	1.70

These coefficients are applicable to Central Kitchen space determinations as well as cafeteria kitchens.

Since few industrial feeding establishments have meal loads above 8,000, coefficients have not been developed for larger facilities.

Seating Space Coefficient - 17 sq. ft. per person seated. (Seating space coefficient includes space for aisles, dishwashing unit, serving counters, the space behind serving counters as well as space for back counter equipment.)

^{1/} These figures are approximate and are based upon the standard plans developed by the War Food Administration.

LIST OF DIFFERENT TYPES OF FACILITIES
USED IN THE WFA INDUSTRIAL FEEDING PROGRAM

Series COM., Commissary

- Series COM
a Storage house, for kitchens, cafeterias, etc., where meat is processed to cooking stage and vegetables are cleaned and prepared for cooking. Includes bakery, sandwich making, and box lunch preparation.
- Series COM
r Storage house. Prepares food for mobile units, canteens, etc., only. (Lunch boxes, sandwiches, beverages, etc.) Includes bakery.

Series C.K., Central Kitchen

- Series C.K.
a Has complete food preparation, bakery, and storage facilities. Serves Stationary Fast Service Units, lunch counters, and all other types of service units.
- Series C.K.
b Has limited storage facilities, food being received from commissary. Has complete food preparation facilities. Serves Stationary Fast Service Units, lunch counters, and all other types of food service units.
- Series C.K.
c Specifically designed for preparation of food for mobile units and/or food carriers, etc.

Series CAF, Cafeteria

- Series CAF
a Self-contained cafeteria with full food storage, food preparation, and serving facilities.
- Series CAF
b Same as cafeteria CAF/a with additional facilities for preparing sandwiches and/or hot meals to be served from mobile units, lunch counter, canteens, etc.
- Series CAF
c Cafeteria receiving food from Commissary COM/a with limited storage, full cooking, and serving facilities.
- Series CAF
d Same cafeteria as CAF/c with additional facilities for preparing sandwiches, and/or hot meals to be served from mobile units, lunch counters, canteens, etc.
- Series CAF
e Same as CAF/a except that instead of open cafeteria counter the Assembly Line System is introduced. One or more types and priced meals are completely assembled on trays. Customer has choice of beverage and dessert only.

Series L.C., Lunch Counter

- Series L.C.
a Prepared food is received from central kitchen in insulated containers. Serves full meal. Has short-order facilities and seating space.
- Series L.C.
b Equipment for short-orders only. Has seating space.
- Series L.C.
c No cooking facilities. Serves supplementary lunches, such as soup from carriers, sandwiches, beverages, dessert. Has seating space.

Series SFS, Stationary Fast Service Unit

- Series SFS
a Food received from central kitchen in insulated containers; complete meals served directly from containers. Includes lunch counter for supplemental feeding. Has seating space.

Series L.S., Lunch Stand

- Series L.S.
a Hot and cold food delivered from central kitchen. No seating space.
- Series L.S.
b Same as L.S./a but with short-order facilities. No seating space.
- Series L.S.
c Cold food delivered from central kitchen. No seating space.

Series S.C., Stationary Canteen

- Series S.C.
a Packaged hot and cold food delivered from commissary or central kitchen. Has facilities for storing hot and cold food and preparation of sandwiches, etc. Has shelter.
- Series S.C.
b Same as S.C./a but without shelter.
- Series S.C.
c Packaged hot and cold food delivered from commissary or central kitchen. Has facilities for storing hot and cold food. No preparation facilities. Has shelter.
- Series S.C.
d Same as S.C./c but without shelter.
- Series S.C.
e Serves cold food only. Has shelter.
- Series S.C.
f Same as S.C./e but without shelter.

Series M.U., Mobile Units

All mobile units are loaded at commissary or central kitchen. They are moved to designated places at scheduled periods.

Series M.U.
a Serves complete hot meal, sandwiches, beverages, etc.

Series M.U.
b Serves one hot dish, sandwiches, beverages, etc.

Series M.U.
c Serves cold food, beverages, etc.

Series S, Shelters

Shelters may be used in connection with mobile units, canteens, lunch stands, etc.

Series S
a Open-air pavilion type shelter with seating. Provides for paper service only.

Series S
b Same as S/a but with stand-up arrangement for eating.

Series S
c Enclosed shelter provides for paper or china services with seating.

Series S
d Same as S/c but with stand-up arrangement for eating.

COMMISSARY

Estimated Equipment Requirements

Series COM
a

Storage house for kitchens, cafeterias, etc., where meat is processed to cooking stage. Vegetables cleaned and prepared for cooking. Includes bakery, sandwich making and box lunch preparation.

Equipment lists are based on storage and preparation facilities for the three different sizes of commissaries described below:

<u>Table of Sizes</u>			
<u>Size of facility (meal load)</u>	<u>COM</u> <u>a-80</u>	<u>COM</u> <u>a-120</u>	<u>COM</u> <u>a-160</u>
Total number of meals	8,000	12,000	16,000
Preparation of food to cooking stage for delivery to Series CAF/c cafeterias.			
No. of meals	6,000	9,000	12,000
Complete preparation of hot and cold food for delivery to canteens, etc.			
No. of meals	2,000	3,000	4,000

Description of Facility

The commissary is an especially important element in a large feeding operation. With its general storage, refrigeration, rough preparation, and bakery facilities, the kitchen of the Series CAF/c cafeteria that it serves can be reasonably small, compact, and efficient. With this arrangement food is then cooked in the same building in which it is to be served and has a much higher nutritive value than that which is cooked some time before serving and held in containers and carried to the serving station. In consideration of these factors, the commissary should be recommended in preference to a central kitchen wherever possible.

The kitchen in the commissary will be necessary only when canteens, lunch counters, or mobile units are used in conjunction with cafeterias. Where cafeterias only are to be serviced by the commissary, this kitchen can be eliminated and its space utilized for additional storage.

The standard plans have been laid out with a view toward requiring a minimum personnel to operate the commissary efficiently.

Notice should be taken that in each instance the space allotted to manager or office is relatively small. This restricted space is not

WTA

Office of Distribution

intended to be used as a central office from which all dependent cafeterias and canteens will be operated but simply the control office for the commissary itself. If the feeding operation is plant-managed, the work of a central office will, in most cases, be carried on in the plant office.

Where the feeding operation is to be carried on by a food contractor and it is desired to provide central office control at the commissary, greater office space will be necessary. This can be accomplished by expanding the office space outward so as not to encroach on the operational flow of storage and production.

As far as possible, it is recommended that commissary personnel eat their meal while on duty in the nearest cafeteria as regular customers.

Storage space in each of the three commissaries, especially the refrigerated areas, is based on daily delivery of supplies. When deliveries are made twice weekly, or once a week, proportionate increase of areas should be made. The standard plans have been developed with the storage elements placed so that they can be expanded out from the building without changing the basic design or impairing the flow of production.

The bakery has not been sized to produce bread for sandwich making, as in most instances it will be more economical to purchase it from commercial bakeries. It has been designed for rolls, cakes, pies, puddings, etc. Should bread deliveries be impossible to arrange, the bakery would have to be enlarged to accommodate the necessary extra facilities. This can be done by extending the baking section out as a wing at its present location. In this way the basic relationships of the various parts of the commissary are not changed.

The ceiling height of the building should be between 10 and 12 feet. Temperature-controlled work areas such as butcher shop, preloading room, and garbage room would have ceilings furred down to approximately 8 feet and properly insulated to reduce the cooling load.

Commissary Index

1. SPACE REQUIREMENTS
2. SCALES
3. TRUCKS
4. BAKE SHOP (HEAVY EQUIPMENT)
5. KITCHEN (HEAVY EQUIPMENT)
6. VEGETABLE PREPARATION (HEAVY EQUIPMENT)
7. SANDWICH PREPARATION
8. BUTCHER SHOP (HEAVY EQUIPMENT)
9. REACH-IN REFRIGERATORS
10. WORK TABLES AND COUNTERS
11. SINKS
12. TOILET FIXTURES, ETC.
13. DESKS, STOOLS, CHAIRS, AND BENCHES
14. TRASH AND GARBAGE CONTAINERS,
PAILS AND CLEANING TANKS
15. POTS AND PANS
16. CUTLERY AND UTENSILS
17. CLEANING EQUIPMENT
18. MISCELLANEOUS

COMMISSARY

	COM a-80	COM a-120	COM a-160
1. <u>SPACE REQUIREMENTS (NET AREAS)</u>			
A. <u>Office and Management Space</u>			
General office - net area (Includes Dietitian's desk space in COM/a-80)	140 sq.ft.	210 sq.ft.	280 sq.ft.
Manager	85 "	110 "	120 "
Dietitian		85 "	100 "
Closets			
B. <u>Personnel Space</u>			
Men's locker and toilet space	130 sq.ft.	200 sq.ft.	260 sq.ft.
Women's locker and toilet space	280 "	400 "	500 "
C. <u>Storage Space</u>			
I. Normal temperature space			
Dry storage	320 sq.ft.	450 sq.ft.	550 sq.ft.
Paper storage	160 "	225 "	350 "
Equipment and supplies storage	90 "	130 "	200 "
II. Refrigerated space or walk-in			
Refrigerators, ceiling height 8'-0"			
1. Compressor rooms	-	-	-
2. Vestibules or air locks recommended			
3. Cold dry storage for rice, etc.	65 "	100 "	150 "
4. Frozen foods	85 "	120 "	150 "
5. Bottled goods	85 "	100 "	125 "
6. Dairy products	140 "	210 "	300 "
7. Vegetables	190 "	250 "	350 "
8. Meat and poultry	200 "	275 "	375 "
9. Fish	85 "	85 "	110 "
10. Butcher shop	520 "	575 "	625 "
11. Preloading room	500 "	600 "	700 "
12. Garbage collection room	72 "	100 "	150 "
D. <u>Storage Space Stationery Equipment</u>			
Compressors - coils and temperature regulating devices for refrigerated spaces 2 through 10.	-	-	-
Compressors - coils and temperature regulating devices for refrigerated spaces 11 and 12.	-	-	-
Shelving, hangers, etc. Shelving 24" deep.	-	-	-

	<u>COM</u> a-80	<u>COM</u> a-120	<u>COM</u> a-160
--	--------------------	---------------------	---------------------

2. SCALES

Platform scale - 500-lb. capacity for			
store room			
total	3	3	3
vegetable refrigerator			
bake shop			
Flour scale for bake shop	1	1	1
Scales with 15" scoop, 25-lb.			
capacity for - bake shop	5	5	5
total			
kitchen			
veg. prep. room			
store room			
sandwich room			

3. TRUCKS

Heavy platform trucks, wood platform			
approximately 52" x 28"	5	8	10
Barrel truck or hand truck - 500-lb. capacity	1	2	2
Utility trucks - 24"x 48" platform	5	8	10
Box truck - - - (for trash room)			
approximately 24"x 36"x 24" deep	2	3	3
Dish trucks - 3 deck	2	3	3

4. BAKE SHOP (HEAVY EQUIPMENT)

Bake shop ovens - 4 decks each			
with separate control for each			
deck. Shelf size approx. 30"x 40"	6	8	10
Fewer baking ovens but with larger			
baking capacities each may be used as			
long as total equivalent baking area			
is obtained.			
Rotary oven. Approximately 8' wide x			
6' deep. 4 trays	0	1	0
Rotary oven approximately 11' wide x 7' deep.			
6 trays	0	0	1
Pastry stove - ring approximately			
21" diam.	1	1	1
Trunnion kettle - 60 gal.	1	1	2
40 gal.	0	2	1
30 gal.	1	0	0
Proof Box, approximately			
43" x 32" D. 9 or 10 shelves	1	1	1
25" x 35" D. 18 shelves	0	1	2
Dough mixer, capacity 3/4 bbl.	1	0	0
" 1 "	0	1	0
" 1 1/2 "	0	0	1

WFA
Office of Distribution

	<u>COM</u> a-80	<u>COM</u> a-120	<u>COM</u> a-160
4. <u>BAKE SHOP (HEAVY EQUIPMENT) continued</u>			
Mixer - 2 bowls - 40-and 80-quart with beaters, whips, dough hooks and creamer and juicer attachments	1	1	1
Doughnut machine	1	1	2
Dough cutter	1	2	2
Hood over all heated equipment	-	-	-
Bowl truck and stand on casters with foot plate for stopping and holding	2	4	6
Bread rack on casters with 9 shelves, approximately 29" x 70" x 69"	4	8	8
Pie table (rotating)	0	1	1
Piecrust roller machine	0	1	1
Pie-rimming machine	0	1	1
Apple-coring machine (hand)	1	1	1
Portable pan rack on casters, capacity 30 pans	1	0	0
36 pans	0	2	0
40 pans	0	0	2
Pan rack over sink 24" x 6'	1	1	1
Pan rack over Baker's table - 30" x 6'	1	2	2
5. <u>KITCHEN (HEAVY EQUIPMENT)</u>			
Steam-jacketed kettles, each			
40 to 60 gallons	4	2	4
60 to 80 gallons	0	4	4
3-compartment steamers for potatoes and vegetables	2	4	6
Hoods over heated equipment	-	-	-
Pan rack over counters - 6' each	1	2	3
6. <u>VEGETABLE PREPARATION (HEAVY EQUIPMENT)</u>			
Vegetable paring machine	1	2	2
Electric food cutter with vegetable slicer attachment	1	1	1
Pan rack - approximately 72" wide x 32" deep x 68" high, six shelves	11	2	2
7. <u>SANDWICH PREPARATION</u>			
Slicing machine	1	1	1
Food chopper	1	2	2
8. <u>BUTCHER SHOP (HEAVY EQUIPMENT)</u>			
Meat block 30 x 30"	2	2	3

	COM a-80	COM a-120	COM a-160
8. <u>BUTCHER SHOP (HEAVY EQUIPMENT) continued</u>			
Meat saw (electric)	1	1	1
Meat grinder	1	1	1
Meat slicer	1	1	1
9. <u>REACH-IN REFRIGERATORS</u>			
Bake shop - approximate cubic feet 65	1	0	0
80	0	1	0
105	0	0	1
Sandwich preparation, approximate cubic feet 65	1	0	0
80	0	1	0
105	0	0	1
10. <u>WORK TABLES AND COUNTERS</u>			
A. Bake shop			
Baker's table - with drawers and bins below in units to equal 30" x	12'	18'	24'
General work table - 30" deep x 34" high with equipment shelf below, in units to equal	6'	10'	12'
B. Kitchen			
Work table 30" deep x 34" high with equipment shelf below, in units to equal	12'	18'	24'
Counter 30" deep x 34" high with cupboards above counter and below, in units to equal	20'	30'	36'
C. Vegetable preparation			
Work table - 30" deep x 34" high with equipment shelf below, in units to equal	40'	50'	60'
D. Sandwich preparation			
Sandwich-spread preparation table. 36" deep x 34" high with drawers for utensils and equipment. Shelf below - 12" shelf 20" above table, in units to equal	12'	18'	24'
Work table, 36" x 34" high with drawers and equipment shelf - - - - below, 12" shelf 20" above table, in units to equal	20'	24'	30'
Sandwich-making table with ice pans for spread dishes, 24" x 34" high, in units to equal	12'	18'	24'

<u>COM</u>	<u>COM</u>	<u>COM</u>
a-80	a-120	a-160

10. WORK TABLES AND COUNTERS - continued

D.	Sandwich preparation - continued			
	Sandwich-wrapping counter, 36" deep x 34" high with 12" shelf 20" above table. Shelves and racks built into table for labels, wrapping materials, etc., in units to equal	14'	20'	24'
	Wall case for paper wrapping supplies - 18" deep, in units to equal	16'	20'	24'
E.	Butcher shop			
	Table for landing meats - 30" deep x 34" high. 12" shelf 20" above table	6'	8'	8'
	Work table 30" deep x 34" high, top 3" thick with equipment shelf below. 12" shelf 20" above table, in units to equal	30'	36'	40'

11. SINKS (D. D. B. = Double Drainboards)

A.	Bake shop			
	Double compartment sink 48" x 24" x 16" with 2 - 24" drainboards	1	1	1
	Hand sink, approximately 12" x 15" x 12"	2	2	2
B.	Kitchen			
	Double compartment sink, 60" x 24" x 16" with 24" drainboards - 2	1	1	1
	Hand sink approximately 12" x 15" x 12"	1	1	2
C.	Vegetable preparation			
	Two compartments (each 24" x 24" x 16") D.D.B.	2	2	3
	Hand sink approximately 12" x 15" x 12"	1	1	2
D.	Sandwich preparation			
	Hand sink approximately 12" x 15" x 12"	1	2	2
	Salad sink 20" x 20" x 14" D.D.B.	1	1	2
E.	Butcher shop			
	Butcher sink, single compartment 15" x 16" x 12" D.D.B.	1	1	2
	Hand sink, approximately 12" x 15" x 12"	1	1	1
F.	Container cleaning			
	Sink, 24" x 24" x 16", galvanized iron	1	1	1
	Hand sink, approx. 12" x 15" x 12"	1	1	1
G.	Container sterilizer			
	This may be job-fabricated of metal with rack where containers can be placed inverted over steam nozzles. Down pressure activates steam valves	1	1	1
H.	Washing shelter for food carrier truck and garbage can cleaning and sterilizing.			
	Hose connections for hot and cold water and steam.			

WFA
Office of Distribution

	COM a-80	COM a-120	COM a-160
11. <u>SINKS - continued</u>			
I. Janitor's room 24" x 24" x 16"	1	1	1
Mop sink	1	1	1
12. <u>TOILET FIXTURES</u>			
A. Water closets			
Men's room	1	2	2
Women's room	2	3	4
Office	1	1	1
B. Lavatories 19" x 17" approximately			
Men's room	2	2	2
Women's room	3	3	4
C. Showers - 32" x 32"			
Men's room	1	2	2
Women's room	2	3	4
D. Urinals			
Men's room	1	1	1
13. <u>DESKS, STOOLS, CHAIRS, BENCHES, LADDERS</u>			
A. Desks and chairs			
Desks 34" x 60" - office	3	3	4
Chairs (desk) - office	3	3	4
File cases (letter) - office	2	3	4
Occasional chairs - office	2	2	2
Straight-back - janitor	1	1	1
Time clock	1	1	1
Office machinery and related items	-	-	-
B. Step ladders			
4' high for bake shop	4	4	4
kitchen			
refrigerated space			
one extra			
6' high for paper storage	5	5	5
equipment storage			
dry storage			
janitor			
one extra			
10' high for maintenance work	1	1	1
C. Stools			
Approximately 26" high for			
Bakery shop		2	3
Kitchen	1	2	2
Vegetable preparation	3	3	4
Container cleaning	1	1	1
Shipping clerk	1	1	2
Sandwich preparation	4	6	8
Butcher shop	1	1	2

	<u>COM</u> a-80	<u>COM</u> a-120	<u>COM</u> a-160
13. <u>DESKS, STOOLS, CHAIRS, BENCHES - continued</u>			
D. Benches			
12" wide, 16" high, 6' long			
Men's room	1	2	2
Women's room	1	2	2
14. <u>TRASH AND GARBAGE CONTAINERS, PAILS AND CLEANING TANK</u>			
A. Baskets (trash)			
Waste baskets (trash) 12" D. x 14" high			
Office	3	4	6
Shipping clerk	1	1	2
Men's room	1	1	1
Women's room	1	2	2
Waste baskets (trash) 12" D. x 30" high			
Paper storage	1	2	2
Dry storage	1	2	2
Equipment and supplies storage	1	1	1
Bake shop	2	3	3
Sandwich preparation	2	3	4
Butcher shop	1	2	2
Janitor's room	1	1	1
Men's room (for towels)	1	1	1
Women's room (for towels)	1	2	2
B. Garbage Containers			
Size approx. 20" D. x 26" high, covered, for garbage room	6	8	10
Size approx. 16" D. x 23" high, for			
Bake shop	1	2	2
Kitchen	2	3	3
Vegetable preparation	1	2	3
Butcher shop	1	2	3
Sandwich preparation	1	2	2
C. Pails - 12 qt.	3	3	3
Janitor pails - 16 qt.	3	4	4
D. Mopping tank	2	2	2
All steel mopping tank - 30 gal. with hand wringer. Tank set on large casters.			
15. <u>POTS AND PANS, BOWLS, ETC.</u>			
Baking pans - 12-3/4"x18-1/2"x2"	(doz) 1	1 1/2	2
Baking pans - 23-1/8" x 12-3/4" x 2-3/4"	(doz) 2	3	4
Beating bowls - 12 qt.	(doz) 1	1 1/2	2
Beating bowls - 20 qt.	(doz) 1	1 1/2	2
Bun pans - 18" x 26" x 1"	(doz) 2	3	4
Cake pans - 9" x 9" x 1"	(doz) 1	3	4

		COM a-80	COM a-120	COM a-160
15. <u>POTS AND PANS, BOWLS, ETC. - continued</u>				
Dishpans, 9-qt. capacity, for cleaning	(doz)	1	1 $\frac{1}{2}$	2
Dishpans, 17-qt. capacity	"	1	1 $\frac{1}{2}$	2
Dishpans, 40-qt.	"	$\frac{1}{2}$	3/4	1
Dishpans, 14-qt.	"	$\frac{1}{2}$	3/4	1
Hotel roast pans, single 18" x 24" x 4"	"	1	1 $\frac{1}{2}$	2
Muffin tins - 12 to pan	"	6	9	12
Mixing bowls - 5 $\frac{1}{2}$ -qt. capacity	"	2	3	4
Pie pans, deep, size 10"	"	35	50	75
Pitchers, 4-qt.	"	1	2	3
Pitchers, 6-qt.	"	$\frac{1}{2}$	3/4	1
Pullman pans 16" x 4" x 4", with cover	"	6	9	12
Pudding pans, 4 3/4-qt.	"	1	2	3
Retinned baker's bowl - 28"	"	1/3	$\frac{1}{2}$	2/3
Salad bowls, 9-qt.	"	2	3	4
Sauce pans, 4 $\frac{1}{2}$ -qt.	"	$\frac{1}{2}$	3/4	1
Sauce pans, 8 $\frac{1}{2}$ -qt.	"	$\frac{1}{2}$	3/4	1
Saute pans, French - 14"	"	1/6	$\frac{1}{4}$	1/3
Sheet, cookie - 11" x 16" x 5/8"	"	1 $\frac{1}{2}$	2	3
Sponge kettle tins - 10-qt.	"	1/3	$\frac{1}{2}$	2/3
Sponge kettle tins, 16-qt.	"	$\frac{1}{2}$	2/3	3/4
16. <u>CUTLERY AND UTENSILS</u>				
Apple corers, T-shape		1	2	3
Automatic can openers - hotel use		3	3	3
Basting spoons, retinned steel 16"	(doz)	1	1 $\frac{1}{2}$	2
Boning knives 6"		2	2	2
Butcher knives 10"		1	2	2
Butcher knives 14"		2	4	4
Carborundum stone (for sharpening knives)		1	1	1
China caps	(doz)	1/6	$\frac{1}{4}$	1/3
Cleavers, heavy		2	2	2
Colanders	(doz)	1/6	$\frac{1}{4}$	$\frac{1}{2}$
Fish scalers 4-c		1	2	2
Flour dredges	(doz)	$\frac{1}{4}$	$\frac{1}{2}$	2/3
Flour sieves, 16" dia. No. 8 mesh	"	$\frac{1}{4}$	1/3	$\frac{1}{2}$
Flour sifters, hotel rotary 2-qt.		2	2	2
French knives, 8"		6	9	12
French knives, 10"		2	4	4
Fruit knives, 6"		6	9	12
Funnels, $\frac{1}{2}$ -qt.	(doz)	1/6	$\frac{1}{4}$	1/3
Four-sided graters		1	2	2
Grocers scoop, 5 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ "		2	4	6
Hotel meat forks		2	3	4
Lamb cleaver		1	2	2
Maple paddles, round handles, 48" long		0	1	1

WFA
Office of Distribution

		COM a-80	COM a-120	COM a-160
16.	<u>CUTLERY AND UTENSILS - continued</u>			
Measuring cups - $\frac{1}{2}$ pt.	(doz)	$\frac{1}{2}$	$\frac{3}{4}$	1
Measuring cups - 1 qt.	(doz)	$\frac{1}{2}$	$\frac{3}{4}$	1
Measuring cups - 4 qt.	(doz)	$\frac{1}{2}$	$\frac{3}{4}$	1
Measuring spoons - set	(doz)	$\frac{1}{2}$	$\frac{3}{4}$	1
Paring knives	(doz)	1	$1\frac{1}{2}$	2
Pastry cloths, heavy canvas 40" x 60"		1	2	3
Plain biscuit cutter 2"		1	1	2
Rolling pins, rotary 10" x $2\frac{1}{2}$ "		2	3	4
Salt dredges	(doz)	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{2}$
Sandwich spreaders	(doz)	$\frac{1}{2}$	$\frac{3}{4}$	1
Saw, heavy butcher, 22" length		0	1	1
Saw, kitchen 16" length		1	1	1
Saw, meat 22" length		0	1	1
Scoops	(doz)	$\frac{1}{6}$	$\frac{1}{2}$	$\frac{1}{3}$
Scoop, small		2	3	4
Skimmers, retinned 6"		1	2	2
Spatulas 8" flexible		2	4	6
Spatulas 10" flexible		2	4	4
Strainers, wire, 6"		2	3	4
Whips, balloon 10" ringless		2	3	4
Whips, French, 14" ringless		2	3	4
17.	<u>CLEANING EQUIPMENT (MOPS, ETC.)</u>			
Bench brush, rubberset		0	1	1
Bowl brushes		1	2	2
Brushes, vegetable		4	6	9
Cleaning cloths	(doz)	2	3	4
Deck scrubs with handles		2	2	3
Dish towels	(doz)	6	12	18
Dust pans		2	4	6
Floor brushes, hair, 16", with handles		2	3	4
Hose for cleaning of garbage cans		1	1	1
Meat block brush		1	1	1
Mop outfits		3	4	6
Oven scrapers		1	2	2
Scrubbing brushes, fibre		6	9	12
Squeegee for window cleaning		2	3	4
Steel floor scrapers		1	1	2
18.	<u>MISCELLANEOUS</u>			
Bulletin boards 24" x 24"		4	4	4
Cannisters (4 to a set)	(set)	1	2	3
Cradle for vinegar barrel		1	1	1
Cutting boards 16" x 24" x 2"		3	3	3

WFA
Office of Distribution

	<u>COM</u> a-80	<u>COM</u> a-120	<u>COM</u> a-160
18. <u>MISCELLANEOUS - continued</u>			
Electric clocks for	7	7	8
Office			
Shipping clerk			
Bake shop			
Kitchen			
Vegetable preparation			
Sandwich room			
Butcher shop			
Floor mats (maple) to place in front of ranges			
Floor racks for ice boxes (walk-in) to fit ice box floors			
Floor racks for potwashing department			
Grease brushes, 1" round, rubber set only	2	4	6
Mop rack	1	1	1
Pastry brushes, 2" flat, rubber set only	2	4	6
Pastry cloths, heavy canvas, 40" x 60"	1	2	3
Pipe racks for container cleaning room			
Platform for flour sacks	1	2	2
Platform for sugar sacks	1	1	1
Rack for brooms and brushes	1	1	2
Towel-drying rack, 3 way	1	2	4

CENTRAL KITCHEN

Estimated Equipment Requirements

Series C.K.

a

Has complete food preparation, bakery and storage facilities.
Serves Stationary Fast Service Units, lunch counters, and all other types of service units.

Equipment lists are based on storage and complete preparation facilities for the three different sizes of central kitchens described below:

Size of facility (meal load)	Series		
	<u>C.K.</u> a-80	<u>C.K.</u> a-120	<u>C.K.</u> a-160
Total number of meals	8,000	12,000	16,000
Breakdown			
Complete preparation of hot and cold food to be served from mobile units Number of meals	3,000	4,800	6,400
Complete preparation of hot and cold food to be served from Series <u>SFS</u> Stationary Fast <u>a</u> Service units, Canteens, Lunch Counters, etc. Number of meals	5,000	8,200	9,600

Description of facility

A central kitchen should be considered only when it is impracticable or impossible to use service units with self-contained cooking facilities. When the central kitchen is used it should be located as close as possible to the serving units to reduce to a minimum the time food remains in containers.

The break-down in the number of meals to be served from mobile units and Stationary Fast Service units, etc., was established arbitrarily. The number of meals served from these various types of units may be changed in ratio without affecting the lay-out of the kitchen.

WFA
Office of Distribution

Storage space in each of the three central kitchens, especially the refrigerated areas, is based on daily deliveries of supplies. When deliveries are made twice weekly or only once a week, proportionate increases of areas affected should be made. The standard plans have been developed with the storage elements placed so that they can be expanded out from the building without changing the basic design or impairing the flow of production.

The bakery has not been sized to produce bread for sandwich making as in most instances it will be more economical to purchase it from commercial bakeries. It has been designed for rolls, cakes, pies, puddings, etc. Should bread deliveries be impossible to arrange, the bakery would have to be enlarged to accommodate the necessary extra facilities. This can be done by extending the baking section out as a wing at its present location. In this way the basic relationships of the various parts of the central kitchen are not changed.

The standard central kitchen plan is arranged in such a way that it can be built against or as a wing extending out from an existing building.

The ceiling height should be between 10 and 12 feet over the two -- 22-foot wide sections of the building containing dry storage, offices, container cleaning room, men's and women's locker rooms, trash and garbage rooms and mobile unit inspection, cleaning and loading areas.

It is recommended that the 32-foot wide central section containing all preparation, cooking, and baking facilities have a ceiling height of 15' to 16'. This section should be lighted and ventilated with clerestory windows running the full length of the building.

Equipment is planned for the preparation of the "Basic Menu" (See Part VI, page 2) given for Industrial Cafeteria and the production of food for canteens, mobile units, etc. See suggested breakdown in number of each meal type shown on page 1, Part V.

CENTRAL KITCHEN INDEX

1. SPACE REQUIREMENTS
2. SCALES
3. TRUCKS
4. BAKE SHOP (HEAVY EQUIPMENT).
5. KITCHEN (HEAVY EQUIPMENT).
6. VEGETABLE PREPARATION (HEAVY EQUIPMENT).
7. BUTCHERING (HEAVY EQUIPMENT).
8. SANDWICH PREPARATION.
9. REACH-IN REFRIGERATORS.
10. WORK TABLES AND COUNTERS.
11. SINKS.
12. TOILET FIXTURES, ETC.
13. DESKS, STOOLS, CHAIRS, BENCHES.
14. TRASH AND GARBAGE CONTAINERS, PAILS, AND CLEANING TANK.
15. POTS AND PANS.
16. CUTLERY AND UTENSILS.
17. CLEANING EQUIPMENT.
18. MISCELLANEOUS

CENTRAL KITCHEN

	CK a-80	CK a-120	CK a-160
1. SPACE REQUIREMENTS (Net areas in sq.ft.)			
A. <u>Office and Management Space</u>			
General Office	300 sq.ft.	350 sq.ft.	400 sq.ft.
Manager	120 " "	120 " "	120 " "
Dietitian	120 " "	120 " "	120 " "
Closets	---	---	---
Toilets (men and women) each	50 " "	75 " "	100 " "
B. <u>Personnel space</u>			
Men's locker and toilet space	310 " "	400 " "	450 " "
Women's locker and toilet space	440 " "	500 " "	550 " "
C. <u>Storage space</u>			
I. Normal temperature space.			
Dry storage	375 " "	450 " "	550 " "
Paper storage	180 " "	225 " "	300 " "
Equipment and supplies	220 " "	300 " "	350 " "
II. Refrigerated space or walk-in			
Refrigerators			
Ceiling height, 8' - 0"			
1. Compressor rooms	---	---	---
2. Vestibules or air locks	---	---	---
3. Cold dry storage for rice, etc.	80 " "	110 " "	150 " "
4. Frozen foods	150 " "	200 " "	250 " "
5. Bottled goods	120 " "	150 " "	200 " "
6. Dairy products	200 " "	250 " "	300 " "
7. Vegetables	300 " "	350 " "	400 " "
8. Meat and poultry	225 " "	300 " "	350 " "
9. Fish	30 " "	40 " "	50 " "
10. Garbage collection station	100 " "	125 " "	150 " "
D. <u>Storage space stationary equipment</u>			
Compressors, coils, and temperature regulating de- vices for refrigerated areas, 2 through 9	---	---	---
Compressors, coils, and tempera- ture regulating devices for refrigerated space 10	---	---	---
Shelving, hangers, etc.	---	---	---
Shelving 24" deep			

WFA
Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>
2. <u>SCALES</u>			
Platform scale 500-lb. capacity	3	3	3
Flour scale for bake shop	1	1	1
Scales with 15" scoop, 25-lb. capacity for:			
Bake shop	1	1	1
Kitchen	2	2	2
Store room	1	1	1
Sandwich room	1	1	1
3. <u>TRUCKS</u>			
Platform trucks, wood platform approximately 52" x 28"	4	6	8
Barrel truck or hand truck 500-lb. capacity	1	2	2
Utility trucks, 24" x 48" platform	3	4	6
Box truck (for trash room) approximately 24" x 36" x 24"	2	3	3
Dish trucks - 3 deck	2	3	4
4. <u>BAKE SHOP (HEAVY EQUIPMENT)</u>			
Bake shop ovens - 4 decks each with separate control for each deck. Shelf size approx. 30 x 40"	6	8	10
Fewer baking ovens but with larger baking capacities each, may be used as long as total equivalent baking area is obtained.			
Rotary oven. Approximately 8' wide x 6' deep. 4 trays	0	1	0
Rotary oven approximately 11" wide x 7' deep. 6 trays	0	0	1
Pastry stove - ring approximately 21" diam.	1	1	1

WFA
Office of Distribution

	CK a-80	CK a-120	CK a-160
	No.of Units	No.of Units	No.of Units
4. <u>BAKE SHOP (HEAVY EQUIPMENT) cont'd</u>			
Trunnion kettle - 60 gal.	1	1	2
40 gal.	0	2	1
30 gal.	1	0	0
Proof box, approximately			
43" x 32" D. 9 or 10 shelves	1	1	1
25" x 35" D. 18 shelves	0	1	2
Dough mixer, capacity 3/4 bbl.	1	0	0
" 1 "	0	1	0
" 1 1/2 "	0	0	1
Mixer -- 2 bowls 40 and 80 qt. (with beaters, whips, dough hooks, and creamer and juicer attachments)	1	1	1
Doughnut machine	1	1	2
Dough cutter	1	2	2
Hood over all heated equipment	---	---	---
Bowl truck and stand on casters with foot plate for stopping and holding	2	4	6
Bread rack on casters with 9 shelves, approximately 29 x 70 x 69"	4	6	8
Pie table (rotating)	0	1	1
Piecrust roller machine	0	1	1
Pie-rimming machine	0	1	1
Apple coring machine (hand)	1	1	1
Portable pan rack on casters			
Capacity 30 pans	1	0	0
36 pans	0	2	0
40 pans	0	0	2
Pan rack over sink 24" x 6'	1	1	1
Pan rack over baker's table - 30" x 6'	1	2	2
5. <u>KITCHEN (HEAVY EQUIPMENT)</u>			
Standard hotel ranges with ovens	4	6	8
Roasting ovens, 2-deck	3	5	7

WFA
Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>
5. <u>KITCHEN (HEAVY EQUIPMENT) Cont'd</u>			
Steam-jacketed kettles, capacity			
40 gallons	4	4	4
80 "	4	4	6
100 "	2	6	8
3-compartment steamer for potatoes and vegetables	9	14	18
Fryers - approximate capacity			
1 basket, 30 pounds	3	0	0
2 basket, 60 pounds	0	3	4
Hoods above all heated equipment	---	---	---
Mixing machines, 40 and 100-quart bowls with beaters, whips, dough hooks, and creamer and juicer attachments	2	3	4
Coffee urns - approximate capacity			
100 gallons	3	4	5
Bain marie - 4'	1	0	0
6'	0	1	1
Pot and sauce pan rack over cook's tables			
24" x 6'	4	0	0
24" x 8'	0	4	0
24" x 10'	0	0	4
Portable pan racks on casters			
30 pan	2	0	0
40 pan	0	2	3
Slicing machine	1	1	1
6. <u>VEGETABLE PREPARATION (HEAVY EQUIPMENT)</u>			
Vegetable paring machine	1	2	2
Electric food cutter, heavy duty 20 to 25 pound capacity, with vegetable slicer attachment	1	1	1
7. <u>BUTCHERING (HEAVY EQUIPMENT)</u>			
Meat block, 30 x 30"	2	2	3
Meat saw (electric)	1	1	1
Meat slicer	1	1	1
Meat grinder	1	1	1

WFA
Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>
8. <u>SANDWICH PREPARATION</u>			
Slicing machine	1	1	1
Food chopper	1	1	1
9. <u>REACH-IN REFRIGERATORS</u>			
Approximately 65 cubic feet			
Kitchen	2	1	---
Sandwich preparation	1	---	---
Bake shop	1	---	---
Approximately 80 cubic feet			
Kitchen	---	1	2
Sandwich preparation	---	1	1
Bake shop	---	1	1
10. <u>WORK TABLES AND COUNTERS</u>	<u>Lin.ft.</u>	<u>Lin.ft.</u>	<u>Lin.ft.</u>
A. Bake shop			
Baker's table, with drawers and bins below in units to equal 30" x	12'	18'	24'
General work table - 30" deep x 34" high with equipment shelf below in units to equal	6'	10'	12'
B. Kitchen			
Cook's tables 36" deep x 34" high with equipment shelf below in units to equal	50'	70'	90'
General work tables 30" deep x 34" high with equipment shelf to be used beside reach-in refrigerators, coffee urns, and at pot-washing station	40'	52'	70'
C. Butchering			
General work tables with top made of 3" deep hard wood strips, set edgewise, glued and bolted. Apron with drawers and equipment shelf 10" above floor, in units to equal	24'	32'	40'

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>Lin. ft.</u>	<u>Lin. ft.</u>	<u>Lin. ft.</u>
10. <u>WORK TABLES AND COUNTERS Cont'd.</u>			
D. Sandwich preparation			
Counter 24" deep x 36" high, with drawers and cupboards below for paper and label supplies, in units to equal	20'	26'	32'
Wall cupboards 12" deep x 36" high set 20" above counter for paper and label supplies, in units to equal	20'	26'	32'
General work table 30" deep x 34" high with equipment shelf below	6'	8'	10'
Sandwich spread preparation table 36" deep x 34" high with drawers for utensils and equipment shelf below, 12" shelf set 20" above table, in units to equal	20'	26'	32'
Sandwich-making tables with ice- pans for spread dishes. Tables 24" deep x 34" high in units to equal	16'	24'	32'
Sandwich-wrapping counter 36" deep x 34" high with 12" shelf 20" above table. Shelves and racks built into tables for wrapping materials, labels, etc. in units to equal	16'	20'	24'
E. Dispatcher of mobile units			
Table with drawers and racks for account slips, etc.	8'	8'	8'
	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>
11. <u>SINKS</u>			
A. Vegetable preparation.			
Two compartments (each 24" x 24" x 16") with drainboards	2	2	3

WFA
Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a -160</u>
	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>
11. <u>SINKS</u> cont'd			
B. Butchering			
Butcher sink, single compartment 15" x 18" x 12" with drain boards	1	1	2
C. Kitchen			
For cook's tables			
small, 12" x 15" x 12"	5	7	9
Hand sinks 12" x 15" x 12"	5	7	9
D. Pot washing			
Double compartment 60" x 24" x 16" with drainboards	1	1	2
E. Sandwich preparation			
Salad sink 20" x 20" x 14" with drainboards	1	1	2
Hand sinks 12" x 15" x 12"	2	2	2
F. Bake shop			
Double compartment sink 48" x 24" x 16" with 2 - 24" drainboards	1	---	---
with 2 - 36" drainboards	---	1	---
with 2 - 48" drainboards	---	---	1
Hand sink 12" x 15" x 12"	2	2	2
G. Container cleaning and sterilizing.			
For container cleaning room and mobile unit cleaning and sterilizing room.			
Container cleaning sink 24" x 24" x 16", galvanized iron	2	2	2
Hand sink 12" x 15" x 12"	1	1	1

WFA
Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>	<u>No. of</u> <u>Units</u>
11. <u>SINKS cont'd</u>			
Container-sterilizing equipment This may be job-fabricated of metal with rack where con- tainers can be placed inverted over steam nozzles. Down pressure activates steam valves	2	2	2
H. Washing shelters for food carrier trucks and garbage-can cleaning and sterilizing.			
Hose connections for hot and cold water and steam	2	2	2
I. Mobile unit repair shop			
Galvanized iron sink, approximately 12" x 15" x 12"	1	1	1
J. Janitor's room			
Janitor sink 24" x 24" x 16"	1	1	1
Mop sink	1	1	1
12. <u>TOILET FIXTURES</u>			
A. Water closets			
Men's room	2	3	4
Women's room	3	4	5
Office	2	2	4
B. Lavatories, approximately 19" x 17"			
Men's room	2	3	4
Women's room	4	5	6
Office	2	2	2
C. Showers			
Men's room	2	3	4
Women's room	3	4	5
D. Urinals	2	2	2

Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>
<u>13. DESKS, STOOLS, CHAIRS, BENCHES, LADDERS</u>			
A. Desks and chairs			
Desks 34" x 60" - office	5	5	6
Chairs (desk) office	5	5	6
File cases - letter	2	3	4
Ocasional chairs - office	2	3	4
Straight back (janitor)	1	1	2
Straight back (dispatcher)	1	1	2
Time clock	1	1	1
Office machinery and related items ---	---	---	---
B. Step ladders			
4' high for: Bake shop (total)	5	5	5
Kitchen			
Refrigerated space			
Two extra			
6' high for: Paper storage (total)	5	5	5
Equipment storage			
Dry storage			
Janitor			
One extra			
10' high for maintenance work	1	1	2
C. Stools			
Approximately 26" high for:			
Bake shop	2	3	4
Kitchen	4	5	6
Vegetable preparation	3	4	5
Container cleaning	1	1	2
Sandwich preparation	4	6	8
Butchering	1	1	1
D. Benches (s eating)			
12" wide 16" high 6' long			
Men's room	2	3	4
Women's room	2	3	4

WFA
Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>
14. <u>TRASH AND GARBAGE CONTAINERS, PAILS,</u> <u>AND CLEANING TANKS</u>			
A. Baskets (Trash)			
Waste baskets 12" D. x 14" high			
Office	5	6	6
Dispatcher	1	1	2
Office men's and women's toilets	2	2	4
Personnel men's and women's toilets	2	4	6
Waste baskets (trash) 12" D x 30" high			
Receiving area	2	2	2
Paper storage	1	1	2
Dry storage	1	1	2
Equipment storage	1	1	1
Bake shop	2	2	2
Sandwich preparation	2	2	3
Kitchen area	2	2	2
Mobile unit loading room	3	3	3
Mobile unit inspection room	1	1	1
Janitor's room	1	1	1
Men's room for towels	1	1	2
Women's room for towels	1	1	2
B. Garbage containers			
Size approximately 20" D. x 26" high covered for garbage room	6	8	10
Size approximately 16" D. x 23" high for:			
Bake shop	1	2	2
Kitchen	5	8	10
Vegetable preparation	2	3	3
Butchering	1	2	3
Pot washing	1	1	1
Sandwich preparation	1	2	2
Mobile unit cleaning room	2	2	2

WFA
Office of Distribution

	<u>CK</u> <u>a-80</u>	<u>CK</u> <u>a-120</u>	<u>CK</u> <u>a-160</u>
	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>	<u>No.of</u> <u>Units</u>
C. Pails			
Miscellaneous 12-quart	6	9	12
Janitor 16-quart	3	4	5
D. Mopping tank			
All steel mopping tank - 30-gallon, with hand- wringer. Tank set on large casters	2	2	2
15. <u>POTS AND PANS, BOWLS, ETC.</u>			
Baking pans 12-3/4" x 18-1/2" x 2" (doz.)	5	7	10
Baking pans 23-1/2" x 12-3/4" x 2-3/4" "	3	5	7
Beating bowls - 12 qt. "	1/2	3/4	1
Beating bowls - 20 qt. "	1/2	3/4	1
Bun pans 18" x 26" x 1" "	4	6	8
Cake pans 9" x 9" x 1" "	1	3	4
Dish pans, 9-quart capacity, for cleaning "	1	1 1/2	2
Dish pans, 17-quart capacity "	1	1 1/2	2
Dish pans, 40-quart capacity "	1	1 1/2	2
Double boiler complete with cover, 8-quart "	1/12	1/6	1/6
Hotel roast pans, single 18" x 24" x 4" "	2	3	4
Mixing bowls - 5-1/2 quart capacity "	2	3	4
Muffin tins, 12 to pan "	12	14	16
Pitchers - 4-quart "	3/4	1	1
Pitchers - 6-quart "	1	1 1/2	2
Pie pans, deep, size 10" "	40	60	80
Pudding pans - 4-3/4 quart "	1/2	1	2
Pullman pans, 16" x 4" x 4", with cover "	6	9	12
Salad bowls - 9 quart "	1	1 1/2	2
Saucepans - 4-1/2 quart "	1	1 1/2	2
Saucepans - 8-1/2 quart "	1	1 1/2	2
Sauce pots and covers - 26-quart "	1/2	3/4	1

	CK a-80	CK a-120	CK a-160
<u>15. POTS AND PANS, BOWLS, ETC. CONT'D.</u>			
Saute pan, 20" x 4-1/4" (each)	2	3	4
Saute pans, French - 14" "	2	3	4
Saute pans, French - 6-3/4" "	2	3	4
Skillets, 13" "	4	6	9
Sponge kettles - 10 quart (doz.)	1/3	1/2	1/2
Sponge kettles - 16-quart "	1/2	2/3	3/4
Stock pots - 40 quart "	1/4	1/3	1/2
Retinned baker's bowl - 22" (each)	2	3	4
Bowls, bakers - 34" "	2	3	4
Wood chopping bowls - 15" "	1	2	2
Sheets, cookie - 11" x 16" x 5/8" (doz.)	1 1/2	2	3

16. CUTLERY AND UTENSILS

Automatic can openers - hotel use (each)	3	3	3
Basting spoons, retinned steel 16" (doz.)	1	1 1/2	2
Bottle openers (each)	2	2	2
Boning knives 6" "	2	2	2
Bread knives 10" "	2	2	2
Broiling forks "	2	2	2
Butcher knives 10" "	3	4	6
Butcher knives 14" "	3	4	6
Cake turner, short handle (doz.)	1/6	1/3	1/2
Carborundum stone (for sharpening knives) (each)	3	3	3
China caps (doz.)	1/4	1/3	1/2
Colanders "	1/4	1/3	1/2
Dishers size 12 (each)	2	4	4
Dishers size 18 "	2	3	4
36-part bench-type roll divider "	1	1	1
Double-blade mincing knives "	1	2	2
Fish scalers 4-c "	3	3	3
Flour dredges (doz.)	1/6	1/4	1/3
Flour sifters, hotel rotary 2 quart (each)	3	4	4
Flour sieves 16" d. No.8 mesh (doz.)	1/6	1/4	1/3
French knives 8" (each)	2	2	3

WFA
Office of Distribution

		CK a-80	CK a-120	CK a-160
16. <u>CUTLERY AND UTENSILS CONT'D</u>				
French knives 10"	(each)	4	6	8
Fruit knives 6"	"	6	6	12
Funnels 1/2 quart	(doz.)	1/6	1/4	1/3
Funnels 1 quart	"	1/6	1/4	1/3
Four-sided graters	(each)	3	4	6
Grocers scoop, 5-1/2"				
x 7-1/2"	"	3	4	6
Ladles - 8-1/2 ounce				
soup	(doz.)	1/3	1/2	3/4
Lamb cleaver	(each)	2	2	2
Maple paddles, round				
handle, 48" long	"	3	4	6
Measuring cups - 1/2 pint	(doz.)	1/2	1	1
Measuring cups - 1 quart	"	1/2	1	1
Measuring cups - 4 quart	"	1/8	1/3	1/2
Hotel meat forks	"	1/2	2/3	3/4
Measuring spoons, sets	"	1/4	1/2	1/2
Paring knives	"	1/2	1	2
Pie servers	"	1/3	1/2	1/2
Cleaver, heavy	(each)	2	2	2
Plain biscuit cutter 2"	"	2	3	4
Potpie cutter 5-1/2"	"	3	4	4
Rolling pins, rotary				
10" x 2-1/2"	"	3	4	4
Salt dredges	(doz.)	1/2	3/4	1
Sandwich spreaders	"	1/3	1/2	1/2
Saw, heavy butcher, 22"				
length, with				
2-saw blades	(each)	1	2	2
Saw, kitchen, 16"				
length, with				
2-saw blades	"	1	2	2
Saw, meat, 22" length				
with 2-saw blades	"	1	2	2
Scoop, small	"	2	4	6
Skimmers, retinned 8"	"	2	3	4
Spatulas, 8" flexible	"	4	6	6
Spatulas, 10" flexible	"	4	6	6
Strainers, wire, 6"	"	4	6	6
Whips, balloon 10"				
ringless	"	2	3	3
Whips, French, 14"				
ringless	"	2	3	3

WFA
Office of Distribution

	CK a-80	CK a-120	CK a-160
17. <u>CLEANING EQUIPMENT</u>			
Bench brush, rubber set (each)	1	2	2
Bowl brushes "	2	2	3
Brushes, vegetable (doz.)	1/2	1	1
Cleaning cloths "	2	3	4
Deck scrubs with handles (each)	4	6	6
Dish towels (doz.)	6	12	20
Dust pans (each)	4	6	6
Floor brushes, hair, 16", with handles "	4	6	6
Hose for cleaning of . garbage cans "	4	4	4
Meat-block brush "	3	3	4
Mop outfits "	3	4	6
Oven scrapers "	1	2	2
Scrubbing brushes, fiber (doz.)	1	1 1/2	2
Squeegee for window cleaning (each)	2	3	4
Steel floor scrapers "	2	2	2
Urn mops, long handles, 20" "	2	3	4
18. <u>MISCELLANEOUS</u>			
Bulletin board 20" x 24" (each)	4	5	6
Cradle for vinegar barrel "	1	1	1
Cutting boards 18" x 24" x 2"	4	6	6
Electric clocks for office "	"	"	"
for kitchen (2) "	2	2	2
for bake shop "	1	1	1
for sandwich preparation "	1	1	1
for mobile-unit loading "	6	7	7
Floor mats (maple) to place in front of ranges			
Floor racks for ice boxes (walk-in) to fit ice box floors			
Floor racks for pot-washing department			
Grease brushes, 1" round, rubber set only (each)	2	3	4
Mop rack "	1	1	1
Pastry brushes, 2" flat, rubber set only "	4	3	6

WFA
Office of Distribution

CK
a-80

CK
a-120

CK
a-160

18. MISCELLANEOUS CONT'D.

Pastry cloth, heavy canvas 40" x 60" (each)	1	2	3
Platform for flour sacks "	1	2	2
Platform for sugar sacks "	1	1	1
Pipe racks for container cleaning room and mobile unit cleaning and inspection rooms			
Rack for brooms and brushes (each)	1	1	2
Towel-drying rack - 3 way "	2	3	4
Work bench for mobile-unit repair shop. Size 30" x 16' x 34" high. 2" thick top.			
Shelves or racks for holding paper supplies while loading mobile units			

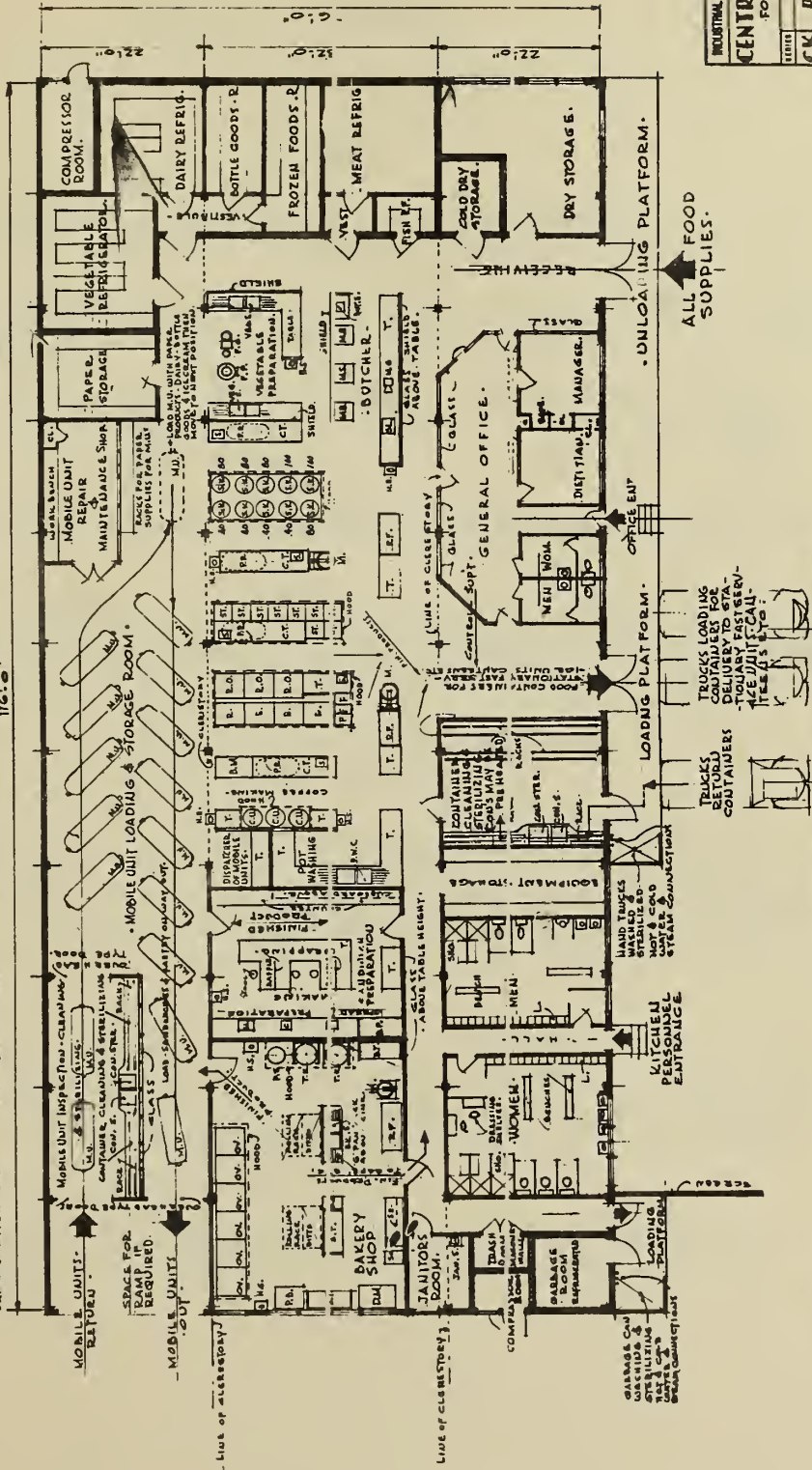
ABBREVIATIONS.

REF. TRUCK - REFRIGERATOR. D.P. - POTATO PEELER.
B.T. - BAKERY TABLE.
C. - CHOPPED.
H.S. - HAND SINK.
P.B. - BAKERY SINK.
P.W. - POT WASHING SINK.
P.S. - SALAD SINK.
V.S. - VEGETABLE SINK.
J.A. - JANITOR'S SINK.
M.S. - MEAT BLOCK.
M.G. - MEAT GRINDER.
M.S.L. - MEAT SLICER.
S.L. - SLICER.
S.C. - SCALE.
O.V. - OVEN.
P.S. - PASTRY STOVE.
M.B. - MEAT BLOCK.
M.G. - MEAT GRINDER.
M.S.L. - MEAT SLICER.
S.L. - SLICER.
S.C. - SCALE.
O.V. - OVEN.
P.S. - PASTRY STOVE.
M.B. - MEAT BLOCK.
M.G. - MEAT GRINDER.
M.S.L. - MEAT SLICER.
S.L. - SLICER.
S.C. - SCALE.
O.V. - OVEN.
P.S. - PASTRY STOVE.

P.B. - PROOF BOX.
D.G. - DOUGH CUTTER.
P.R. - PAN RACK ABOVE TABLE.
O.V. - BAKING OVEN.
R. - RANGE.
M.U. - MOBILE UNIT.
C.U. - COFFEE URN.
C.T. - COOK'S TABLE.
S. - SINK IN COOK'S TABLE.

S.H. - SHELF (12") 10" ABOVE TABLE.
L. - LOCKERS.
S.H. - SHOWER.
C.L. - CLOSET.
M.U. - MOBILE UNIT.
C.U. - COFFEE URN.
C.T. - COOK'S TABLE.
S. - SINK IN COOK'S TABLE.

176' 0"

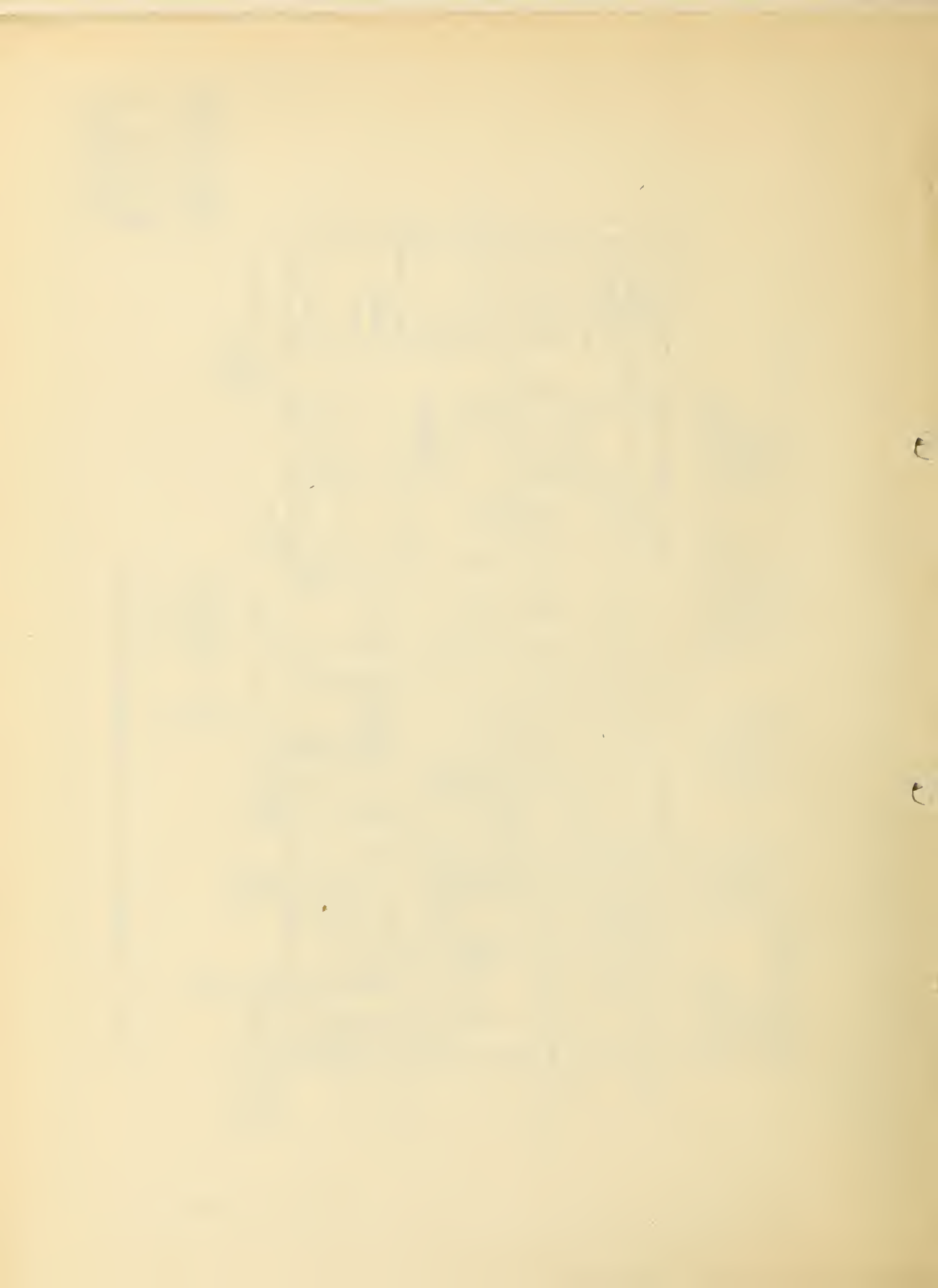


PLAN OF BUILDING • SCALE •

INDUSTRIAL FEEDING FACILITIES MANUAL
CENTRAL-KITCHEN
FOR 8000 MEALS

INDUSTRIAL FEEDING PROGRAMS DIVISION
CIVILIAN FOOD REQUIREMENTS BRANCH
OFFICE OF DISTRIBUTION
WAR FOODS ADMINISTRATION

INDUSTRIAL FEEDING PROGRAMS DIVISION
CIVILIAN FOOD REQUIREMENTS BRANCH
OFFICE OF DISTRIBUTION
WAR FOODS ADMINISTRATION



INDUSTRIAL CAFETERIAS

Estimated Equipment Requirements

Series CAF a

Self-contained cafeteria with full food storage,
food preparation, and serving facilities

The following figures have been based on serving and preparation equipment for three different sizes of industrial cafeterias:

CAF/a-2	Feeding	250	-	400	workers	Seating capacity	200
CAF/a-4	"	400	-	800	"	"	400
CAF/a-8	"	800	-	1,300	"	"	800

It is contemplated that two lunch periods of 30 minutes each will be allowed.

The equipment is also based on the diners being trained to clear their dishes and trays and carry them to the dish station, and also on training them to move quickly, select items quickly, and leave the tables promptly.

Modifications will be necessary for locations remote from supply of materials, particularly from refrigeration.

Modifications may also be necessary if lunch counters, canteens, and mobile units are supplied from the kitchen equipment. Feeding capacity can be increased greatly by adding additional units of equipment, thus increasing the capacity of the minimum skeleton units, and permitting preparation of food for lunch counters, canteens, and rolling equipment.

No bakery has been provided for the CAF/a-2. These smaller cafeterias may find it more efficient to purchase bakery products from commercial bakeries. Should it be impossible to arrange for regular delivery of such products, it is suggested that the type bakery shown for CAF/a-4 be added to the equipment of the CAF/a-2.

The bakery is arranged for the preparation of rolls and hot bread, pastry, etc. Sandwich or large loaf bread would be purchased from commercial bakers.

INDUSTRIAL CAFETERIAS

Self-contained cafeteria with full food storage,
food preparation, and serving facilities

Equipment

Based upon:

Lunch periods - 30 minutes each
Number of seatings - 2 or more

Service units arranged to serve:

Basic Menu for Industrial Plant - (Moderate and Heavy Activity)

- 1 Soup
 - 2 or 3 Entrees
 - 1 or 2 Meats
 - 1 Meat alternate
 - 3 Vegetables
 - 1 Potato (occasionally may use rice, macaroni or other cereal pastes)
 - 2 Leafy green or yellow vegetables (may use 1 other type)
 - 2 or more Salads including:
 - 1 Vegetable salad
 - 1 Fruit salad
 - 2 Desserts
 - 1 Baked dessert
 - 1 Pudding and/or ice cream or sherbet
 - 2 (or more) Fruits
 - 1 Fresh fruit in season
 - 1 Citrus fruit, citrus fruit juice or tomato juice
- Whole wheat and enriched bread and/or rolls
Butter or fortified margarine
- Beverages
- Milk
 - Tea
 - Coffee

INDUSTRIAL CAFETERIA EQUIPMENT INDEX

1. SERVING COUNTERS, STEAM TABLES AND COUNTER EQUIPMENT
2. KITCHEN, HEAVY EQUIPMENT
3. BAKESHOP, HEAVY EQUIPMENT
4. REFRIGERATION
5. WORK TABLES
6. SINKS
7. OFFICES, LOCKER-ROOMS, SUPPLY STORAGE, ETC.
8. TABLES AND CHAIRS
9. SCALES
10. TRUCKS
11. POTS, BOWLS, AND PANS
12. CHINAWARE, VITRIFIED
13. GLASSWARE
14. SILVERWARE AND TRAYS
15. CUTLERY AND UTENSILS
16. CLEANING EQUIPMENT (MOPS, ETC.)
17. MISCELLANEOUS

INDUSTRIAL CAFETERIAS

Equipment List

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

1. SERVING COUNTERS, STEAM TABLES, AND COUNTER EQUIPMENT

Serving counters (straight and short counters provide for faster service)

15 foot length 2

18 foot length 4 4

Steam tables 4 feet 2

6 feet 4 4

Counter space with ice pans for salads, etc., 4 feet 2

Counter space with ice pans for milk, 4 feet, shelving above for dessert display 2 4 4

Counter space for bread and display, 3 feet 2

4 feet 4 4

Serving space for coffee, urn stands, 4'6"x2'0" 1

3'0"x2'0" 4

5'6"x2'0" 2

Space for checking register totalizers 2 4 4

(Cashier's desk, when placed at the exit door, helps to speed up the service)

Space for tray and silver - 2' x 2' 2

4' x 2' 4 4

Bus stands - these may not be necessary in all types of units 4 6 8

Batteries of urns - 10 gals. water - 1) each 1

5 gals. coffee- 2) each

10 gals. water - 1) each

5 gals. coffee- 1) each 4

20 gals. water - 1) each

10 gals. coffee- 2) each 2

Iced water dispensing unit (away from ends of line) 1 2 2

Racks for glasses 1 2 2

Cash registers 2 4 4

Cash boxes (one 13"x9"x6 $\frac{1}{4}$ " reserve - others 10"x5"x3-3/4" depending upon number of meals - 1 box for each cashier, one for reserve) 3 5 5

Tobacco stand, approximately 4'0"x6'0" space required, equipment should be selected according to items served 1

Lunch counter - for serving of supplementary lunches and tobacco - equipment should be selected according to items served 1 2

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

1. SERVING COUNTERS, STEAM TABLES, AND COUNTER EQUIPMENT
- continued

Insets for 10 $\frac{1}{2}$ " cut out	(doz)	1 $\frac{1}{3}$	2 $\frac{1}{3}$	1 $\frac{1}{2}$
Insets for 8 $\frac{1}{2}$ " cut out	"	1 $\frac{1}{2}$	1	1 $\frac{1}{2}$
Steam table pans - 12" x 20"	"	2 $\frac{1}{3}$	1 1 $\frac{1}{3}$	1 $\frac{1}{2}$
Steam table pans - 2 qt. - gravies and sauces	"	1 $\frac{1}{3}$	2 $\frac{1}{3}$	3 $\frac{1}{4}$
Steam table pans - 4 $\frac{1}{2}$ qt.	"	1 $\frac{1}{2}$	1	1
Steam table pans - 9 qt.	"	1 $\frac{1}{2}$	1	1 $\frac{1}{2}$
Fruit juicer, mechanical or hand	each	1	2	2

2. KITCHEN, HEAVY EQUIPMENT

Standard hotel ranges with oven		2	3	3
Steam jacketed kettles - 25 gallons		1	1	1
Steam jacketed kettles - each 40 to 60 gallons		0	1	2
3-compartment steamers for potatoes and vegetables		1	2	2
Fryers - approximately 30 lbs. fat capacity		1	1	2
Hoods above ranges, etc.		1	1	1
Meat slicing machine		1	1	1
Vegetable paring machine		1	1	1
Chopping machine		1	1	1
Meat block		1	1	1
Meat saw - electric		0	0	1
Mixing machine -- 2 - 30 qt. bowls (with beaters, whips, dough hooks; and creamer and juicer attachments)		1	0	0
Dishwashing machine, capacity 1500		1		
3000			1	
5000				1
Glass washing machine, capacity 400			1	
600				1
Crank type automatic butter cutter		1	1	1

3. BAKE SHOP, HEAVY EQUIPMENT

Bake ovens - 3 decks each with separate control for each deck - gas or electric - shelves approximately 30" x 40"		0	1	2
Proof box		0	1	1
Pastry stove		0	1	1
Hoods above ovens and stove		0	1	1
Mixing machine - with 30 and 80 quart bowls (with beaters, whips, dough hooks; and creamer and juicer attachments)		0	1	1

WFA
Office of Distribution

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

7. OFFICES, LOCKER-ROOMS, SUPPLY STORAGE, ETC. - continued

Office space for manager and dietitian			
Office space for office staff and department heads			
Cleaning closet with mop sink for janitor's equipment	1	1	1
Room for storage of trash	1	1	1
Room for cleaning garbage cans and storage of garbage, furnished with sterilizing equipment.	1	1	1
Low benches for dressing rooms	2	2	4
Store room for groceries, etc. with shelving 24" deep			

8. TABLES AND CHAIRS FOR DINING ROOM

Chairs	200	400	800
Tables - 4 seat	50	100	200

9. SCALES

Platform scale - 500 lbs. capacity	1	1	1
Flour scale for bakeshop	0	1	1
Scales with 15" scoop - 25 lbs. capacity	1	2	3

10. TRUCKS

Platform trucks, heavy duty, wood platform, approximately 52"x28"	1	1	1
Barrel truck - or hand truck - 500 lbs. capacity	1	1	1
Dish trucks	3	5	8
Mop trucks	1	2	2

11. POTS AND PANS, BOWLS, ETC.

Baking pans - 12-3/4"x18-1/2"x2"	(doz)	1/2	3/4	1
Baking pans - 23-1/8"x12-3/4"x2-3/4"	"	1/2	1	1 1/2
Beating bowls - 12 qt.	"	1/4	1/2	1 1/2
Beating bowls - 20 qt.	"	1/6	1/4	1/3
Bun pans - 18"x26"x1"	"	1/2	1/2	2/3
Cake pans, 9"x9"x1"	"	1	3	4
Dish pans - 9 qt. capacity, for cleaning	"	1/2	1/2	1
Dish pans - 17 qt. capacity	"	1/2	1/2	1
Dish pans - 40 qt.	"	1/6	1/2	1
Dish pans - 14 qt.	"	1/4	1/3	1 1/2

WFA
Office of Distribution

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

11. POTS AND PANS, BOWLS, ETC. - continued

Double boiler complete with cover - 6 qt.	(doz)	1/12	1/6	1/6
Hotel roast pans, single 18"x24"x4"	"	1/3	1/2	3/4
Muffin tins, 12 to pan	"	2	4	6
Mixing bowls - 5 1/2 qt. capacity	"	1	1	1 1/2
Pie pans, deep, size 10"	"	3	6	10
Pitchers - 4 qt.	"	1/2	3/4	1
Pitchers - 6 qt.	"	1/6	1/4	1/3
Pudding pans - 4-3/4 qt.	"	1/2	1	1 1/2
Pullman pans 16"x4"x4", with cover	"	1	1 1/2	2
Salad bowls - 9 qt.	"	1/2	1	1
Sauce pans - 4 1/2 qt.	"	1/3	1/2	3/4
Sauce pans - 8 1/2 qt.	"	1/3	1/2	3/4
Sauce pots and covers - 26 qt.	"	1/6	1/4	1/2
Sauce pots and covers - 20 qt.	"	1/4	1/2	1/2
Saute pan 20"x4-1/4"	"	1	2	2
Saute pans, French - 14"	"	1	2	2
Saute pans, French - 6-3/4"	"	1	2	2
Skillets, 13"	"	1	2	2
Sponge kettle - 10 qts.	(doz)	1/3	1/2	1
Sponge kettle - 16 qts.	"	1/3	1/2	1
Stock pots - 40 qt.	"	1/6	1/4	1/3
Retinned baker's bowl - 28"	"	0	2	2
Wood chopping bowls - 15"	"	1	2	2

12. VITRIFIED CHINAWARE - HOTEL WEIGHT

Dinner plates 9-5/8" - 3 compartments	(doz)	40	60	100
Bread and butter, 5 1/2", pies, salads	"	60	90	120
Creamers for cereals - 3 oz.	"	15	30	50
Mugs - 8 oz.	"	40	60	105
Plates, for shortcakes, dumplings, puddings, fruit or sauce dishes 5 1/4"	"	60	90	120
Soup bowls	"	40	60	100

13. GLASSWARE

Tumblers - 8 oz.	(doz)	60	105	165
Tumblers - 10 oz. for iced tea, etc.	"	30	50	80
Ash trays	"	10	15	25
Creamers for coffee - 1 oz.	"	30	60	100
Fruit juice glasses - 5 oz.	"	60	105	150

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

13. GLASSWARE - continued

Glass lemon reamers	(doz)	1/6	1/4	1/4
Pepper shakers	"	10	15	25
Pyrex custards	"	15	30	60
Salt shakers	"	10	15	25
Sugar bowls or shakers	"	10	15	25
Vinegar bottles 6 1/2 oz.	"	10	15	25

14. SILVERWARE AND TRAYS

Dessert spoons	(doz)	36	60	95
Forks	"	36	60	95
Knives	"	36	60	95
Teaspoons	"	60	90	120
*Trays - 17-3/4"x13-3/4" approximate size	each	375	625	1000

15. CUTLERY AND UTENSILS

Apple corers, T-shape		1	2	3
Automatic can openers - hotel use		1	1	2
Basting spoons, retinned steel 16"		2	4	6
Bottle openers		2	2	2
Boning knives 6"		1	1	2
Bread knives 10"		1	2	2
Broiling forks		1	1	1
Butcher knives 10"		1	2	2
Butcher knives 14"		1	1	1
Cake turner, short handle	(doz)	1/6	1/3	1/2
Carborundum stone (for sharpening knives)		1	1	1
China caps	(doz)	1/6	1/6	1/4
Colanders	"	1/6	1/6	1/4
Dishers, size 8		1	2	2
Dishers, size 10		2	3	4
Dishers, size 12		2	4	4
Dishers, size 16		1	2	2
36-part bench type roll divider		0	1	1
Double blade mincing knives		1	2	2
Doughnut cutters 2 1/2"		0	1	2

*There should be 1 tray per person seated and 25% additional allowance for other service and breakage.

WFA
Office of Distribution

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

15. CUTLERY AND UTENSILS - continued

Fish scalers 4-c		1	1	1
Flour dredges	(doz)	1/6	1/4	1/3
Flour sifters, hotel rotary 2 qt.		1	2	2
Flour sieves 16" diameter, No. 8 mesh	(doz)	1/12	1/6	1/4
French knives 8"		2	2	3
French knives 10"		2	2	3
Fruit knives 6"		6	6	12
Funnels 1/2 qt.	(doz)	1/6	1/4	1/3
Funnels 1 qt.	"	1/6	1/4	1/3
Four sided graters		1	2	2
Grocers scoop, 5 1/2"x7 1/2"		2	2	2
Ladles - 2 oz. gravy	(doz)	1/4	1/3	1/2
Ladles - 4 1/2 oz. vegetables	"	1/2	3/4	1
Ladles - 8 1/2 oz. soup	"	1/3	1/2	3/4
Lamb cleaver		1	1	1
Maple paddles, round handle, 48" long		1	1	1
Measuring cups - 1/2 pt.	(doz)	1/4	1/3	1/2
Measuring cups - 1 qt.	"	1/6	1/6	1/3
Measuring cups - 4 qt.	"	1/12	1/6	1/4
Hotel meat forks		2	3	4
Measuring spoons	(doz)	1/4	1/3	1/2
Paring knives	"	1/2	1	2
Pastry cloths, heavy canvas 40"x60"		1	2	3
Pie servers	"	1/6	1/4	1/3
Plain biscuit cutter 2"		1	1	2
Pot pie cutter 5 1/2"		1	1	1
Rolling pin, rotary 10"x2 1/2"		1	2	3
Salt dredges	(doz)	1/4	1/3	1/2
Sandwich spreaders	"	1/3	1/2	1/2
Saw, heavy butcher, 22" length, with 2 saw blades		0	1	1
Saw, kitchen 16" length, " " " "		1	1	1
Saw, meat 22" length, " " " "		0	1	1
Scoops	(doz)	1/6	1/4	1/3
Scoop, small		2	2	2
Serving spoons, solid bowl	"	1/2	1	1 1/2
Serving spoons, slotted	"	1/3	3/4	1
Skimmers, retinned 8"		1	2	2
Spatulas 8" flexible		1	2	3
Spatulas 10" flexible		1	2	3
Strainers, wire, 6"		2	3	4
Tongs, serving	(doz)	1/4	1/2	1

WFA
Office of Distribution

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

15. CUTLERY AND UTENSILS - continued

Whips, balloon 10" ringless	1	2	3
Whips, French, 14" ringless	1	2	3

16. CLEANING EQUIPMENT (MOPS, ETC.)

Bench brush, rubber set	0	1	1
Bowl brushes	1	2	3
Brushes, vegetable	4	6	9
Cleaning cloths (doz)	2	3	4
Cream bottle brushes	1	2	3
Deck scrubs with handles	2	2	3
Dish towels "	6	12	18
Dust pans	2	4	6
Floor brushes, hair, 16", with handles	2	3	4
Garbage cans	4	6	8
Hose for cleaning of garbage cans	1	1	1
Meat block brush	1	1	1
Mop outfits	3	4	6
Oven scrapers	1	2	2
Pails - 12 qt. capacity, welded ears (doz)	1/2	1/2	1/2
Scrubbing brushes, fibre	6	9	12
Squeegee for window cleaning	2	3	4
Steel floor scrapers	1	1	2
Urn gauge brushes	1	2	3
Urn mops, long handles, 20"	1	2	3

17. MISCELLANEOUS

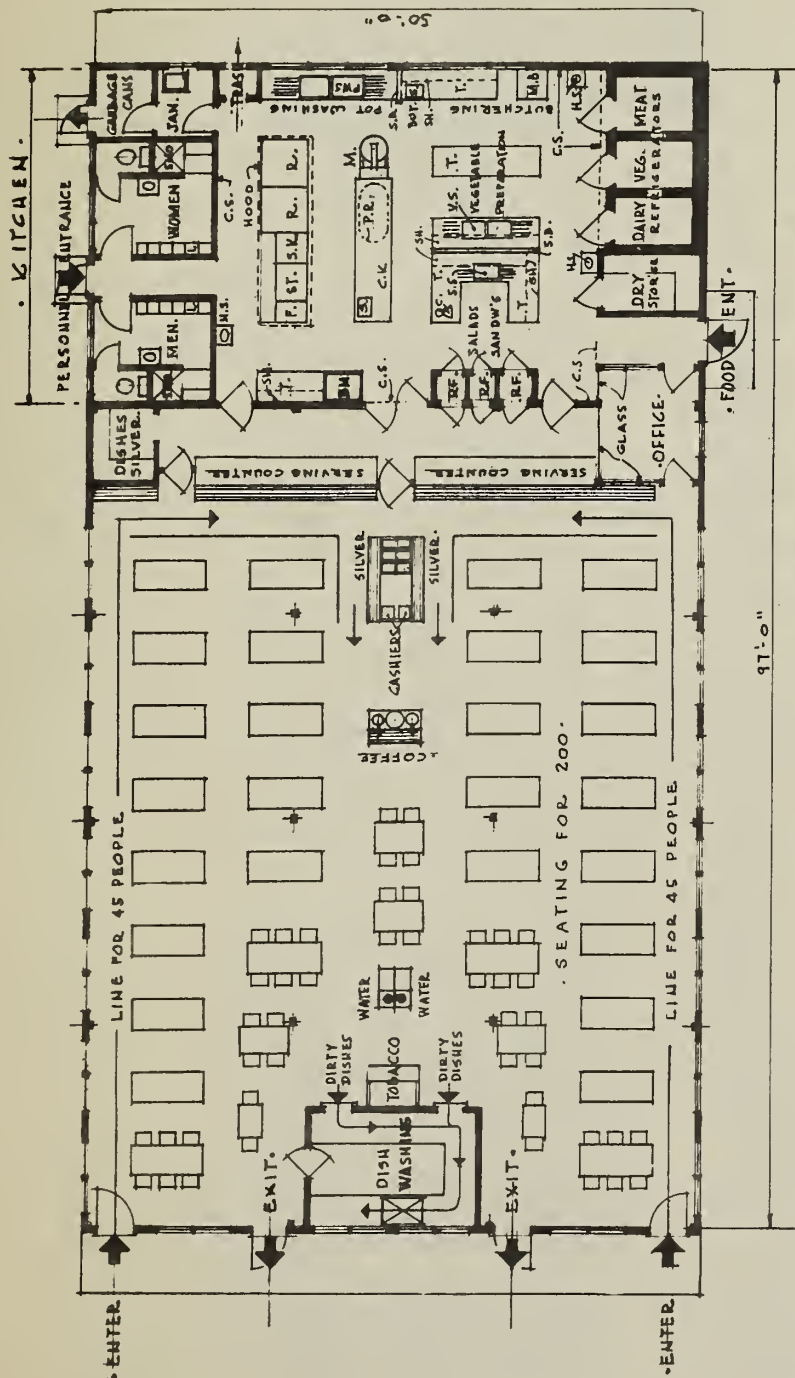
Bread boards 30"x24"x1"	2	3	4
Cannisters (4 to a set) (set)	1	2	3
Cradle for vinegar barrel	0	0	1
Cutting boards 18"x24"x2"	2	3	3
Electric clock	1	1	1
Floor mats (maple) to place in front of ranges			
Floor mats (maple) for dishwashing unit			
Floor racks for ice boxes (walk-in) to fit ice box floors			
Floor racks for dishwashing department			
Floor racks for glass washing department			
Grease brushes, 1" round, rubber set only	1	2	3
10-ft. Ladder (kitchen)	1	1	1
Letters for menu boards			

WFA
Office of Distribution

FOR FEEDING		
250	400	800
to	to	to
400	800	1300
CAF/a-2	CAF/a-4	CAF/a-8

17. MISCELLANEOUS - continued

Menu boards 20" high x 15" wide, standard (D.R.)	2	4	8
Mop rack	1	1	1
Pastry brushes, 2" flat, rubber set only	2	2	3
Platform for flour sacks	1	2	2
Platform for sugar sacks	1	1	1
Racks for baker's products	0	1	2
Rack for brooms and brushes	1	1	2
Racks for cook's utensils	1	2	2
Silver bins, 4-compartment, 17-3/4"x19 ¹ / ₂ "x3 ¹ / ₂ "	4	6	8
Stepladders, low	1	2	2
Stepladder, tall	1	1	1
Towel drying rack - 3 way	1	2	4
Utility trash cans (for D.R.)	12	18	24



PLAN OF BUILDING • SCALE • 1" = 10'

ABBREVIATIONS.

B.M. = BAIN MARIE.
 R.F. = REACH-IN REFRIGERATOR.
 T. = TABLE.
 C.K. = COOK'S TABLE.
 P.R. = POT RACK.
 S. = SINK.
 P.W.S. = POT WASHING SINK.
 B.U.T.S. = BUTCHER'S SINK.
 V.S. = VEGETABLE SINK.
 S.S. = SALAD SINK.
 H.S. = HAND SINK.
 C. = CHOPPER.
 S.K. = STEAM KETTLE.
 S.T. = STEAMER (POTATOES ETC.).
 F. = FRYER.
 M. = MIXER.

M.B. = MEAT BLOCK.
 R. = RANGE.
 S.H. = SHELF (12" 20" ABOVE TABLE).
 L. = LOCKERS (DOUBLE DECK).
 S.H.O. = SHOWER.
 C.S. = LINE OF CLERESTORY.
 S.B. = SPLASH BOARD (20" HIGH ABOVE T.).

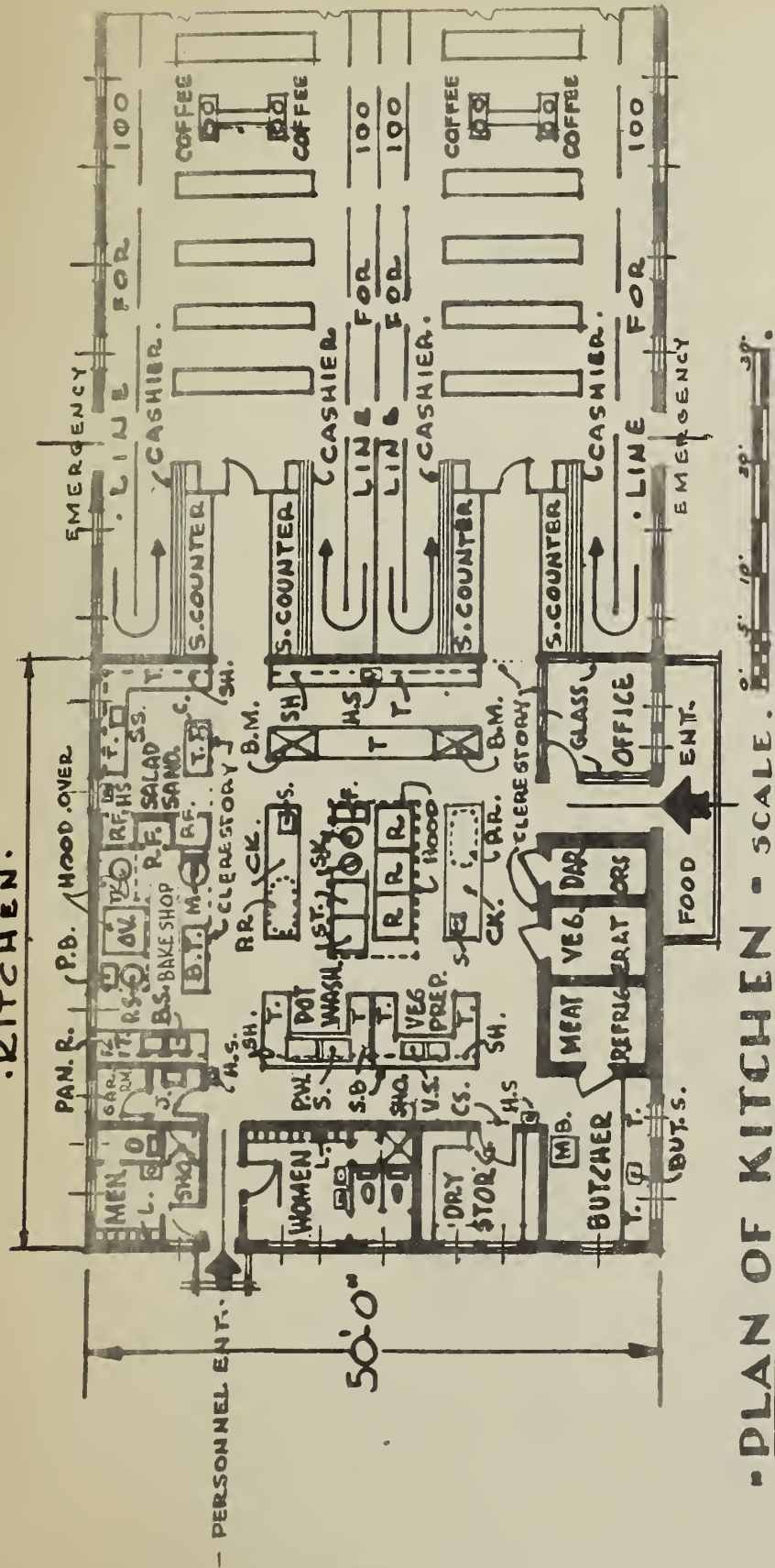
INDUSTRIAL FEEDING FACILITIES MANUAL

CAFETERIA.
 SEATING 200.

SERIES	TITLE OF SHEET	SHEET NO.
CAF.	PLAN OF	1.
22	BUILDING.	5-5-44

INDUSTRIAL FEEDING PROGRAMS DIVISION
 CIVILIAN FOOD REQUIREMENTS BRANCH
 OFFICE OF DISTRIBUTION
 WAR FOOD ADMINISTRATION

·NETHEN·



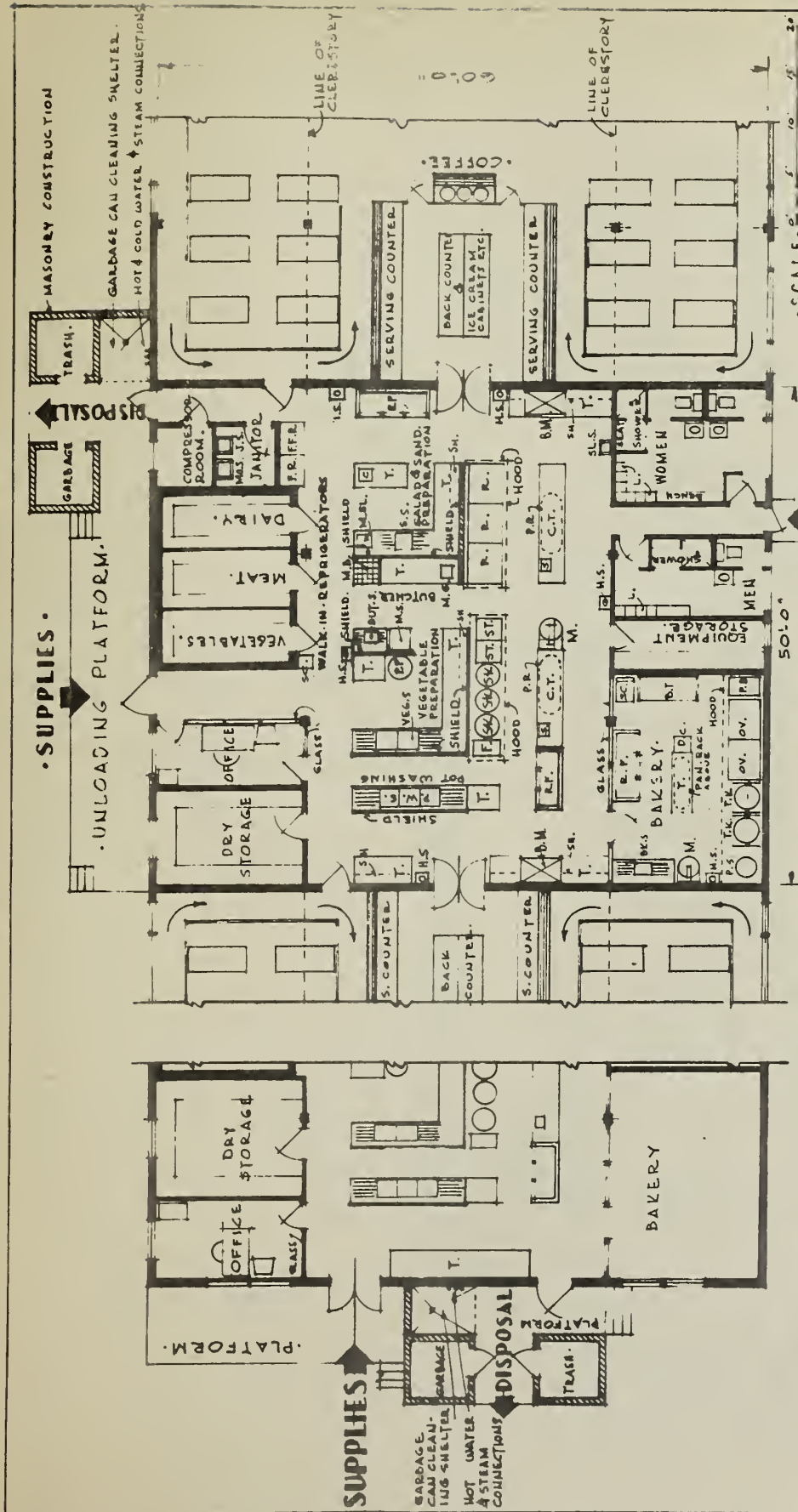
ABBREVIATIONS.

BM = BAIN MARIE
 B.F. = REACH-IN REFRIGERATOR
 T. = TABLE
 BK. = BAKERS TABLE
 CK. = COOKS TABLE
 PR. = POT RACK
 S. = SINK
 PWS = POT WASHING SINK
 BUTS = BUTCHER'S SINK
 B.S. = BAKERS SINK

V.S. = VEGETABLE SINK.
S.S. = SALAD SINK.
H.S. = HAND SINK.
C. = CHOPPER.
S.K. = STEAM KETTLE.
ST. = STEAMER. (POTATO)
F. = FRYER.
M. = MIXER.
P.B. = PROOF BOX.
M.B. = MEAT BLOCK.

T.K. = TRUNNION KETTLE.
P.S. = PASTRY STOVE.
OV. = OVEN.
R. = RANGE.
PANR. = PAN-RACK OVER SINK & T.
SH. = SHELF (12") 20" ABOVE TABLE.
L. = LOCKERS (DOUBLE DECK)
SHA. = SHOWER.
C.S. = LINE OF CLOSETORY.
S.B. = SPLASH-BOARD - 18" HIGH ABOVE T.

INDUSTRIAL FEEDING FACILITIES MANUAL	• CAFETERIA • SEATING 400 WITH LUNCH COUNTER, STANDING		TITLE OF SHEET	PLAN OF • KITCHEN •	SHEET NO.	2.	472.44
	ORDER	CAF a.4					
INDUSTRIAL FEEDING PROGRAMS DIVISION CIVILIAN FOOD REQUIREMENTS BRANCH OFFICE OF DISTRIBUTION WAR FOOD ADMINISTRATION							



VARIATION.

ABBREVIATIONS.

B.M. = BAIN MARIE.
 B.K.S. = BAKERS SINK.
 B.S. = BUTCHER'S SINK.
 B.T. = BAKER'S TABLE.
 C. = CHOPPER.
 C.T. = COOK'S TABLE.
 D.C. = DOUGH CUTTER.
 F. = FRYER (30° FAT CAPACITY).
 F.F.R. = FROZEN FOOD REFRIG.
 F.D. = FISH REFRIGERATOR.
 H.S. = HAND SINK.
 J.S. = JANITOR'S SINK.

L. = LOCKERS.
 M. = MIXER.
 M.O.S. = MOP SINK.
 M.B. = MEAT BLOCK.
 M.G. = MEAT GRINDER.
 M.S. = MEAT SAW (ELECTRIC).
 M.S.L. = MEAT SLICER.
 O.V. = OVEN (BAKING - 4 DECKS).
 P.B. = PROOF BOX.
 P.P. = POT RACK ABOVE TABLE.
 P.P. = POTATO PEELER.
 P.S. = PASTRY STOVE.

P.W.S. = POT WASHING SINK.
 R. = RANGE (HOTEL TYPE).
 R.P. = REACH-IN REFRIGERATOR.
 S. = SINK IN COOK'S TABLE.
 SH. = SHELF (12"), 20" ABOVE TABLE.
 SK. = STEAM KETTLE.
 S.L.S. = SLOP SINK.
 ST. = STEAMER. (3-COMPARTMENT, PLATFORM TYPE).
 S.C. = SCALE. (PLATFORM TYPE).
 S.S. = SALAD SINK.
 T. = TABLE.
 T.K. = TRUENION KETTLE.
 VEG.S. = VEGETABLE SINK.

KITCHEN PLAN.

PERSONNEL.

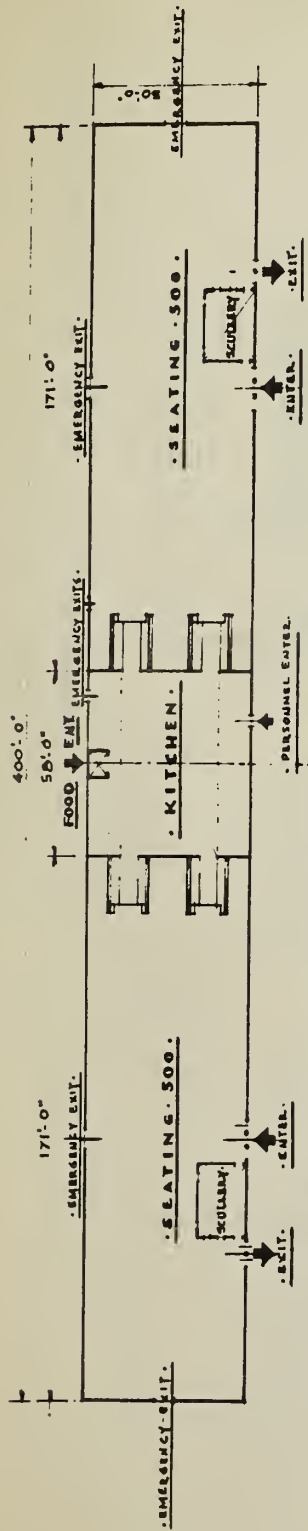
SCALE. 0 10 20

INDUSTRIAL FEEDING FACILITIES MANUAL

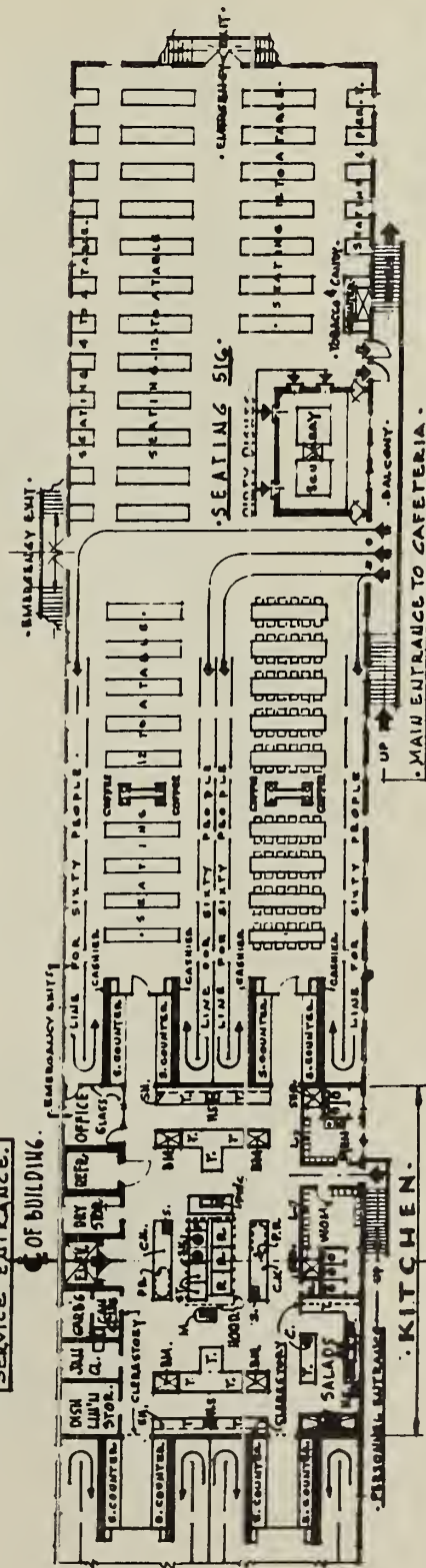
CAFETERIA SEATING-800

SERIES	TITLE OF SHEET	SHEET NO.
CAF	KITCHEN PLAN	2.
a 8	MEAL LOAD 800-1300	8-244

INDUSTRIAL FEEDING PROGRAMS DIVISION
 CIVILIAN FOOD REQUIREMENTS BRANCH
 OFFICE OF DISTRIBUTION
 WAR FOOD ADMINISTRATION



PLAN OF BUILDING. SCALE. 1/4" = 10'-0"
 NOTE-TWO STORY BUILDING WHERE GROUND SPACE IS UNAVAILABLE, FIRST FLOOR RETAINS ORIGINAL USE.
 WHEN USED AS A ONE STORY BUILDING, ELEVATOR SPACE BECOMES SERVICE ENTRANCE.

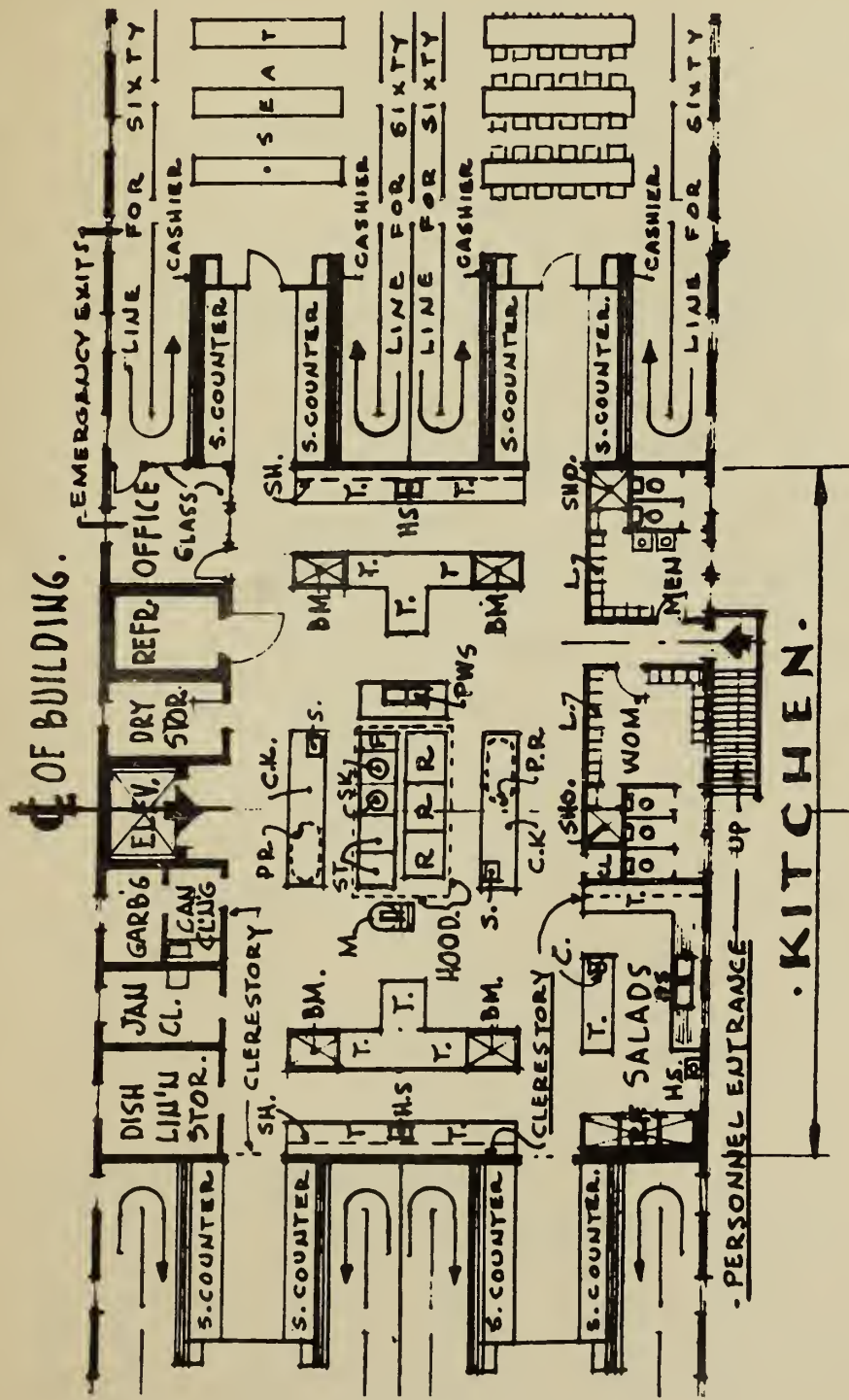


PLAN AT SECOND FLOOR. (HALF OF BUILDING) SCALE. 1/4" = 10'-0"

ABBREVIATIONS.

- BM. = BAIN MARIE.
- RF. = REACH-IN REFRIGERATOR.
- T. = TABLE.
- CK. = COOK'S TABLE.
- PR. = POT RACK.
- S. = SINK.
- M. = MIXER.
- SS. = SALAD SINK.
- HS. = HAND SINK.
- C. = CHOPPER.
- SK. = STEAM KETTLE.
- ST. = STEAMER (POTATOS ETC.)
- F. = FRYER.
- R. = RANGE
- PWS. = POT WASHING SINKS.
- SH. = SHELF (12" 20" ABOVE TABLE.
- SHO. = SHOWER.
- L. = LOCKERS (DOUBLE-DECK)
- CL. = CLOSET.

INDUSTRIAL FEEDING FACILITIES MANUAL			
• CAFETERIA • • SEATING..1000.			
SHEET NO.	TITLE OF SHEET	SHEET NO.	
CAF. C.M.	• PLANS •	1.	
4-10-46			
• INDUSTRIAL FEEDING PROGRAMS DIVISION • • CIVILIAN FOOD REQUIREMENTS BRANCH • • OFFICE OF DISTRIBUTION • • WAR FOOD ADMINISTRATION •			



PLAN OF KITCHEN. SCALE. 1" = 10'

ABBREVIATIONS.

- B.M. = DRAIN MARIE
- RF = REACH-IN REFRIGERATOR
- T. = TABLE
- CK. = COOK'S TABLE
- P.R. = POT RACK
- S. = SINK
- M. = MIXER.

- S.S. = SALAD SINK
- H.S. = HAND SINK.
- C. = CHOPPER.
- S.K. = STEAM KETTLE
- ST. = STEAMER (POTATOS ETC.)
- F. = FRYER.
- R. = RANGE
- P.W.S. = POT WASHING SINK
- GA. = SHELF.
- SHO. = SHOWER.
- L. = LOCKERS (DOUBLE DECK)
- CL. = CLOSET.

INDUSTRIAL FEEDING FACILITIES MANUAL		
-CAFETERIA- -SEATING-1000-		
SERIES	TITLE OF SHEET	SHEET NO.
CAF c-10	PLAN OF KITCHEN	2.
		4-18-44
INDUSTRIAL FEEDING PROGRAMS DIVISION CIVILIAN FOOD REQUIREMENTS BRANCH OFFICE OF DISTRIBUTION WAR FOOD ADMINISTRATION		

LUNCH COUNTER

Seating - 200 each period

Estimated Equipment Requirements

Series $\frac{LC}{a}$

Prepared food is received from central kitchen
in insulated containers. Serves full meal.
Has short order facilities and seating space.

Equipment Index

1. COUNTERS AND COUNTER EQUIPMENT
2. POTS AND PANS
3. CHINAWARE - VITRIFIED - HOTEL WEIGHT
4. TRAYS AND SILVERWARE
5. GLASSWARE
6. CUTLERY AND UTENSILS
7. TABLES AND CHAIRS
8. MISCELLANEOUS

Equipment List

Equipment to serve two periods.

	<u>Number of Units</u>
1. <u>COUNTERS AND COUNTER EQUIPMENT</u>	
Back counter - approximately 20 feet with shelves and cabinets	1
Cash register with cash drawer	1
Counter - approximately 20 feet in length with display shelves	1
Counter for candy, cigarettes, etc. - approximately 3 feet, with glass and wood shelves	1
Double drinking fountain (bubble type)	1
Fruit juicer, hand operated	1
Griddle - 2 ft., attached to range	1

WFA
Office of Distribution

Number
of Units

1. COUNTERS AND COUNTER EQUIPMENT - continued

Hood above oven	1
Ice cream cabinet - 3 compartment	1
Insulated food carriers	10
One unit hotel range, 4 burners, with open top and oven	1
Platform with wheels for insulated food carriers	2
Refrigerator, 6 cubic feet.	1
Salad and dessert counter with overhead shelves and ice pan	1
Sandwich grill	1
Sandwich table, 8', with ice pan and inset compartments for fillings with 2 overhead shelves	1
Sink - 2 compartments, each 24"x24"x16"	2
Toaster - (savory 2-slice)	1
10 gallon coffee urn with 15 gallon hot water jacket gas or electrically heated	1

2. POTS AND PANS

Frying pans - 12"	2
Frying pans - 8"	2
Pitchers - 4 qt.	2
Sauce pans - 8 qt.	1
Sauce pans - 4 qt.	2

3. CHINAWARE - VITRIFIED - HOTEL WEIGHT

Bread and butter, pies and salads - 5 $\frac{1}{2}$ "	(doz)	55
Creamers for cereal - 3 oz.	"	15
Dinner plates 9-5/8" - 3 compartment	"	45
Mugs	"	45
Plates for shortcakes, dumplings, puddings, fruit or sauce dishes - 5 $\frac{1}{4}$ "	"	55
Soup bowls	"	45

4. TRAYS AND SILVERWARE

Dessert spoons	(doz)	40
Forks	"	40
Knives	"	40
Plastic serving trays - 17-3/4"x13-3/4"	"	31
Teaspoons	"	60

5. GLASSWARE

Ashtrays	(doz)	6
----------	-------	---

WFA
Office of Distribution

Number
of Units

5. GLASSWARE - continued

Creamers for coffee - 1 oz.	(doz)	35
Fruit juice glasses - 5 oz.	"	25
Lemon reamers	"	1/6
Pepper shakers	"	6
Salt shakers	"	6
Sugar bowls or shakers	"	6
Tumblers - 8 oz.	"	50
Tumblers - 10 oz., for iced tea, etc.	"	15
Vinegar bottles	"	6

6. CUTLERY AND UTENSILS

Automatic scoop (ice cream) #12	1
Automatic scoop (for meat substitutes) #8	1
Automatic scoop (for potatoes) #10	1
Automatic scoop (for salads) #16	1
Bottle opener	2
Gravy ladle	1
Knives, work, assorted	12
Meatfork, 2 prong, long handle	1
Meatfork, 2 prong, short handle	1
Pancake turner	1
Pie server	1
Serving tongs	3
Serving spoons 20"	3
Soup ladle	1
Spatula	1
Vegetable ladle, perforated	2
Vegetable ladle, regular	2

7. TABLES AND CHAIRS

Chairs	200
Tables - 4 party	50

8. MISCELLANEOUS

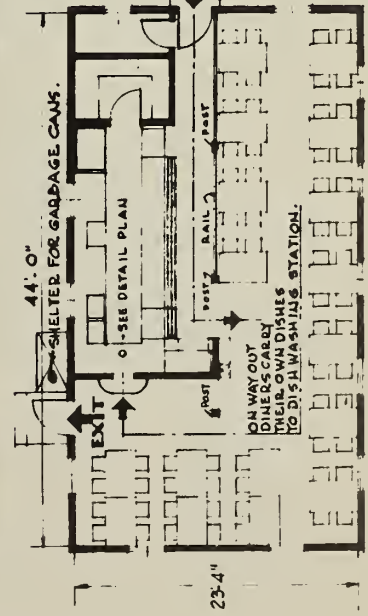
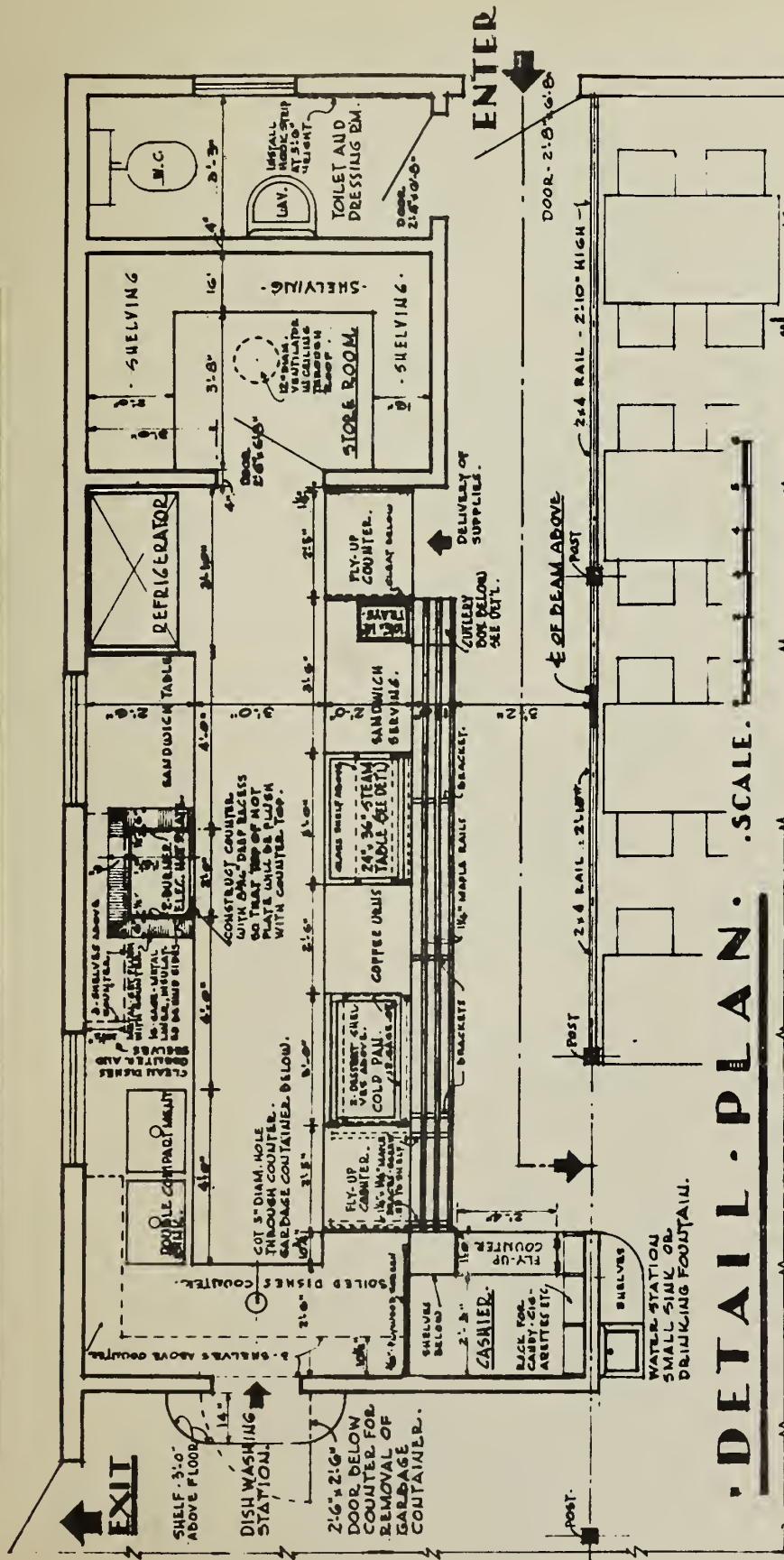
Cream bottle brushes	2
Cutting boards	2
Dish cloths	(doz) 3
Dish towels	" 3
Dust pan	2
Floor brushes (hair)	2
Floor mop outfit	1
Garbage cans with covers	6
Silver bins, (4 compartment)	4
Trash cans	4
Urn gauge brushes	1
Urn mop	1

WFA
Office of Distribution

Number
of Units

8. MISCELLANEOUS - continued

Dishwashing machine, capacity 1500 (estimated volume)	1
Lockers for kitchen personnel	8
Toilet rooms with one water closet and one lavatory each	
Men	1
Women	1
Slop sink for maintenance, 20"x20"x16"	1
Utility room, for equipment storage, 24" wide shelving	



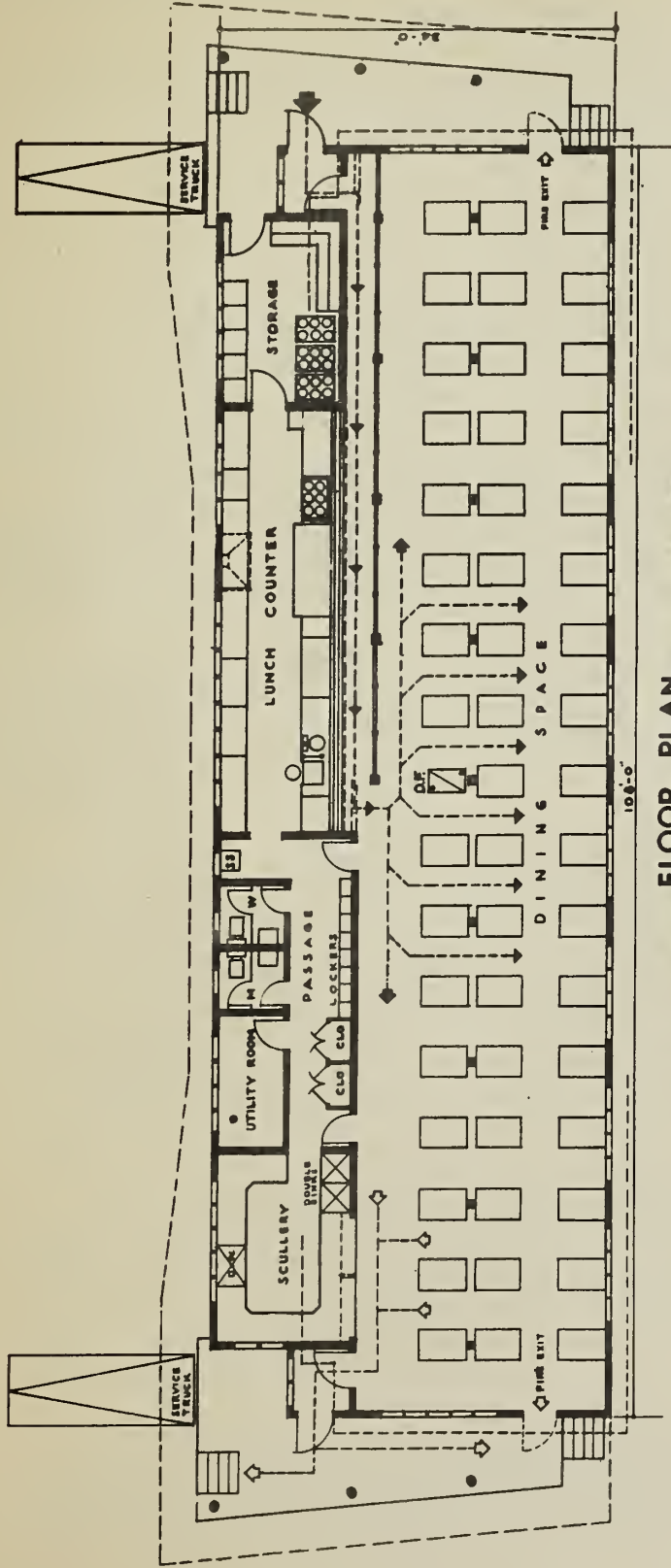
DETAIL PLAN

SCALE

SEATING FOR 62.

PLAN OF BUILDING.

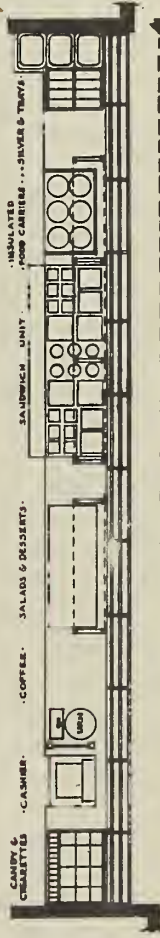
INDUSTRIAL FEEDING FACILITIES MANUAL			
• LUNCH COUNTER - SERVING 100.			
SERIES	TITLE OF SHEET	SHEET NO.	
L.C.	PLAN OF BUILDING	1.	
01.	DETAIL PLAN.	4-4-44	
• INDUSTRIAL FEEDING PROGRAM'S DIVISION • CIVILIAN FOOD REQUIREMENTS BRANCH • OFFICE OF DISTRIBUTION • WAR FOOD ADMINISTRATION.			



FLOOR PLAN

SCALE

FLOOR AREA 3,000 SQ. FT.
SEATING - 200 PERSONS



PLAN OF LUNCH COUNTER

SCALE

DRAWINGS ORIGINALLY PREPARED BY F.W.A.

INDUSTRIAL FEEDING FACILITIES MANUAL			
LUNCH COUNTER			
SEATING - 200			
SERIES	TITLE OF SHEET	SHEET NO.	
LC	PLAN OF	1.	
a.2	BUILDING	6-20-44	
INDUSTRIAL FEEDING PROGRAMS DIVISION			
CIVILIAN FOOD REQUIREMENTS BRANCH			
OFFICE OF DISTRIBUTION			
WAR FOOD ADMINISTRATION			

STATIONARY FAST SERVICE UNIT

Seating Approximately 500 Persons Each Period

Estimated Equipment Requirements

Series SFS

a

Food received from central kitchen in insulated containers, complete meals served from containers. Includes lunch counter for supplemental feeding. Has seating space.

Description of the Stationary Fast Food Service Unit

The stationary fast food service unit was designed specifically for use in shipyards and other war plants where it is necessary to serve large numbers of workers during short lunch periods. It may be used to serve food prepared in a kitchen located in another building at the plant or food prepared in a central kitchen serving several plants in a war production area.

Prepared food packed in insulated containers is brought to the unit and is placed on hand trucks, on the counters, and in the storage room, prior to the lunch period. The entree, vegetables, and soup are served directly from the containers mounted on the hand trucks, thereby eliminating the need for steam tables to keep food hot.

Referring to Drawing No. 1, customers enter at point A where they observe the menu for the day and determine which of the two nutritionally balanced meals they desire. After paying cash or scrip to the cashier, or after placing a coin or token in the turnstile, they take their places in the lines as indicated. At point B customers receive trays containing napkin, knife, fork, and spoon, entree and vegetables and a bowl of soup, which have been assembled on the tray by 3 food servers, directly from the insulated food containers. At point C the customers select bread and butter; at point D, dessert; and at point E, a cold drink. If a hot drink is desired, the customers move to point F and are served without holding up the line.

After eating, customers carry their trays and soiled dishes to the sculleries, located on both floors and leave the building passing the canteen counter where fresh fruit, tobacco, and candy may be obtained. The canteen counter also serves sandwiches, hot soup, and coffee for workers who bring part of their lunch or do not desire a complete meal. Canteen customers may eat in the building on the second floor or they may take the food out to be eaten elsewhere.

The seating capacity of this unit is 580 persons during one lunch period. Seats are provided for 500 customers served the complete meals and for 80 persons who purchase part of their lunches at the canteen. When operated with a full staff, the food assembly lines will serve customers at the rate of

WFA
Office of Distribution

approximately 15 per minute on each line. The unit may be used to serve 2 or 3 times the seating capacity where lunch periods are staggered. Sufficient food container storage space is provided to eliminate the necessity for making deliveries during lunch-time.

Personnel to operate the unit will consist of 2 cashiers, 10 food servers in the food assembly unit and 3 in the canteen, 2 persons in each scullery unit and supervisor, a total of 20 persons. Where a unit operates for a single lunch period, all personnel except the scullery workers and the supervisor may be plant workers who leave their regular jobs $\frac{1}{2}$ hour before lunch-time and return $\frac{1}{2}$ hour after the lunch period. The scullery workers will unload delivery trucks and clean the premises as well as wash dishes. This work, in most instances, will provide full-time employment.

Local conditions should be taken into account in determining the details of construction, insulation, acoustic treatment of walls and ceilings, lighting, heating, and decoration. In making decisions on these matters consideration should be given to the desirability of providing an atmosphere conducive to relaxation during the lunch period. With this in mind provision should be made for playing suitable music at meal times.

STATIONARY FAST SERVICE UNIT EQUIPMENT INDEX

1. COUNTERS AND EQUIPMENT FOR FAST SERVICE UNIT
2. TABLES AND CHAIRS
3. COUNTER AND EQUIPMENT FOR CANTEEN
4. SCULLERY
5. SINKS
6. REST ROOMS
7. INSULATED FOOD CARRIERS
8. CHINAWARE, VITRIFIED - HOTEL WEIGHT
9. TRAYS AND SILVERWARE
10. GLASSWARE
11. CUTLERY AND UTENSILS
12. MISCELLANEOUS

STATIONARY FAST SERVICE UNIT

Equipment List

1. COUNTERS AND EQUIPMENT FOR FAST SERVICE UNIT

Counter - 2' wide	Linear feet	76
Counter for cashier - 1' wide	Linear feet	7
Shelving - 1' wide	Linear feet	348
1' - 3" wide	Linear feet	26
2' wide	Linear feet	140
Galvanized steel ice pan, 18" x 42" x 6" deep	Each	2
#16 ga. galvanized steel, 2" insulation		
Cash registers - with cash drawer	Each	2
Propeller type vent fans, 6000 cubic feet minute, 1 1/3 h.p. per motor	Each	2
Drinking fountains, electric, bubbler type, 10-gallon per hour capacity		4
Turnstiles		2
Menu board and letters	Each	2

2. TABLES AND CHAIRS

Tables - 4 party	Each	50
6 party	Each	50
Chairs	Each	500
Stools for cashiers	Each	2

3. COUNTER AND EQUIPMENT FOR CANTEEN

Front counter - 1' 9" wide	Linear feet	29
Back counter - 2' wide	Linear feet	13
Work counter - 2' wide	Linear feet	10
Shelving - 2' wide	Linear feet	40
Shelving for candy and cigarettes (glass and wood trays) 2' x 2'6"	Each	2
Galvanized steel ice pan, 18" x 42" x 6" deep, #16 ga. galvanized steel, 2" insulation	Each	1
Ice cream cabinet, 4-hole, double row. Complete with refrigerating unit. About 39" long, 31" wide, 32" high	Each	1
Cash register with cash drawer	Each	1
Menu board and letters	Each	1

4. SCULLERY

Soiled dish counter - 2'6" wide	Linear feet	196
Clean dish counter - 1' wide	Linear feet	48
Galvanized sheet steel for dish tables	Lbs.	1200

WFA
Office of Distribution

4. SCULLERY - continued

Shelving, wood, for soiled dishes on trays, 1'3" wide	Linear feet	80
Dumbwaiter - hand power, 200-lb. capacity, 30" x 30"	Each	1
Dishwashing machine - capacity 80-100 20" x 20" baskets, 100-125 - 20" x 16" baskets, for hot water, if steam is not available	Each	1

5. SINKS

Sink, 18" x 20" - single, for fast food service unit	Each	1
Sink, 18" x 20" - single, for canteen	Each	1
Galvanized steel soaking sink, 24" x 30" single, for scullery	Each	2
Service sink outfit, vitreous ware, for janitor's closet	Each	1

6. REST ROOMS

Lockers, double tiers, small		
Water closet outfits with low tanks, vitreous ware	Each	3
Lavatory outfits, vitreous ware	Each	2
Urinal	Each	1

7. INSULATED FOOD CARRIERS

3-gallon capacity single unit insulated food carriers for transportation and serving:		
Soup	Each	20
Meat stews and soft meat alternates	Each	14
Potatoes	Each	10
Vegetables	Each	10
Pan assembly food carriers containing 4 pans of 4 $\frac{1}{2}$ -qt. capacity for transporting and serving:		
Sliced meats, fish, poultry	Each	8
Vegetable and/or mixed salads	Each	6
8-gallon capacity insulated liquid carriers with faucet and with dispersing stand for serving:		
Coffee	Each	4
1-gallon capacity insulated liquid pouring jug for serving cream for coffee	Each	6
4-gallon capacity insulated liquid carriers for serving fruit and tomato juice	Each	8
Food carrier platform with handle & wheels	Each	8
Dish trucks	Each	3

8. CHINAWARE, VITRIFIED - HOTEL WEIGHT

Dinner plates - 9-5/8" - 3 compartments	(doz)	110
Plates for short cakes, dumplings, puddings, fruit and sauce dishes, 5 1/4"	(doz)	110
Bread and butter, pies and salads, 5 1/2"	(doz)	150
Mugs	(doz)	75
Soup bowls	(doz)	110

9. TRAYS AND SILVERWARE

Trays, 17-3/4" x 15-3/4" (approximate size)	Each	1250
Knives	(doz)	110
Forks	(doz)	110
Teaspoons	(doz)	150
Dessert spoons	(doz)	110

10. GLASSWARE

Tumblers, 8-oz.	(doz)	100
Tumblers, 10-oz. for iced tea, etc.	(doz)	50
Fruit juice glasses, 5-oz.	(doz)	50
Creamers for coffee, 1-oz.	(doz)	75
Salt shakers	(doz)	25
Pepper shakers	(doz)	25
Sugar bowls or shakers	(doz)	25
Vinegar bottles	(doz)	25
Ash trays	(doz)	25

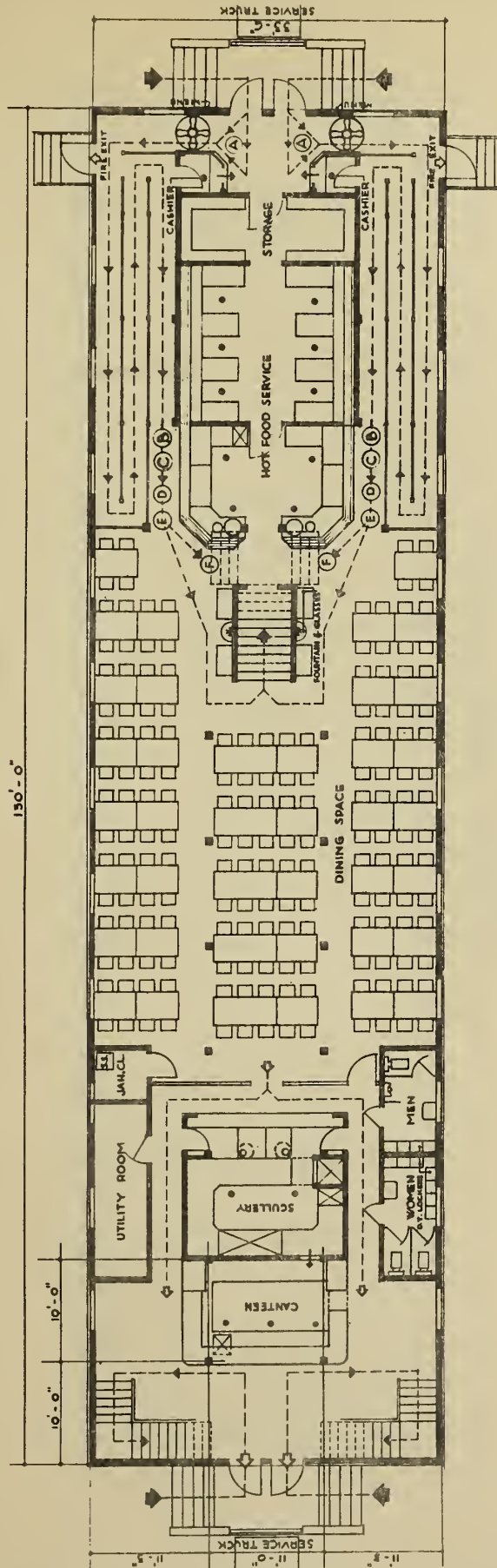
11. CUTLERY AND UTENSILS

Bottle opener	Each	4
Serving tongs	Each	6
Serving spoons - long handle	Each	6
Meat fork, 2 prong, long handle	Each	6
Meat fork, 2 prong, short handle	Each	6
Soup ladle	Each	3
Gravy ladle	Each	3
Vegetable ladle, perforated	Each	3
Vegetable ladle, regular	Each	3
Pancake turner	Each	3
Pie server	Each	4
Spatula	Each	3
Automatic scoop (for meat substitutes) #8	Each	2
Automatic scoop (for potatoes) #10	Each	2
Automatic scoop (for ice cream) #12	Each	4
Automatic scoop (for salads) #16	Each	3

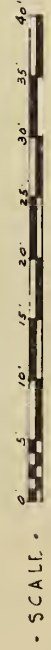
WEA
Office of Distribution

12. MISCELLANEOUS

Silver bins (4 compartments)		4
Cream bottle brushes		3
Floor mop outfits		2
Mop truck		2
Dust pan		3
Floor brushes, hair		3
Dish towels	(doz)	5
Dish cloths	(doz)	5
Garbage cans	Each	10
Trash cans	Each	10
Racks for trays - brooms, etc. in janitor's closet	Each	1

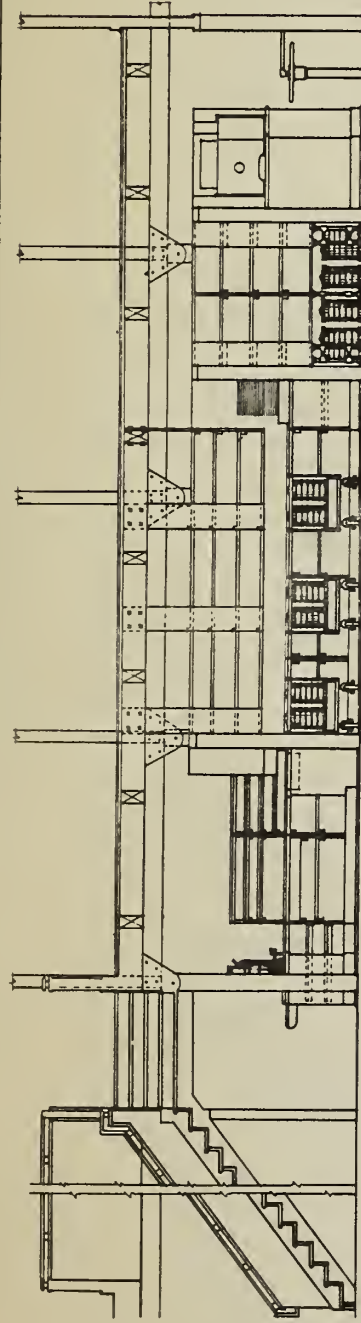


FIRST FLOOR PLAN



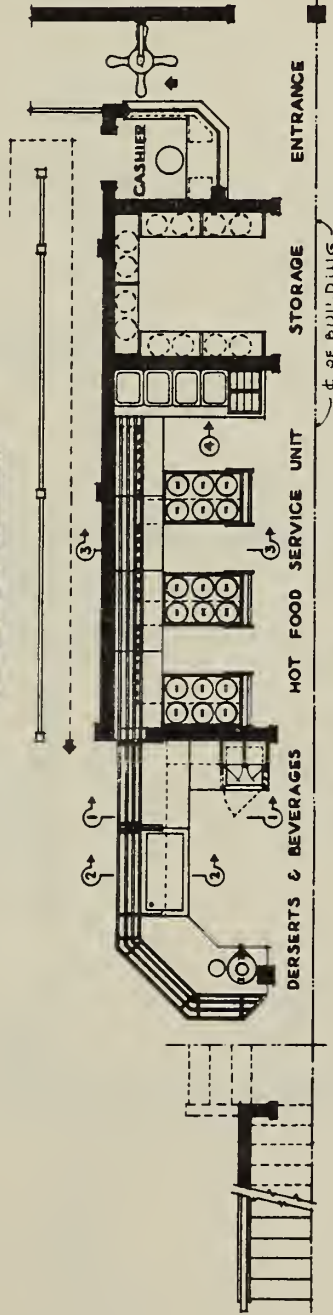
FLOOR AREA - 1st FL. = 9,355 SQ. FT.
 2nd FL. = 4,355 SQ. FT.
 TOTAL = 13,710 SQ. FT.
 SEATING - 1st FL. = 170
 2nd FL. = 410
 TOTAL = 580
 ● INDICATES OPERATORS

INDUSTRIAL FEEDING FACILITIES MANUAL	
STATIONARY FAST SERVICE UNIT SEATING 500 - WITH CANTEEN -	
SERIES S.F.S. a.5	TITLE OF SHEET FIRST FLOOR PLAN 1.
INDUSTRIAL FEEDING PROGRAMS DIVISION CIVILIAN FOOD REQUIREMENTS BRANCH OFFICE OF DISTRIBUTION WAR FOOD ADMINISTRATION	

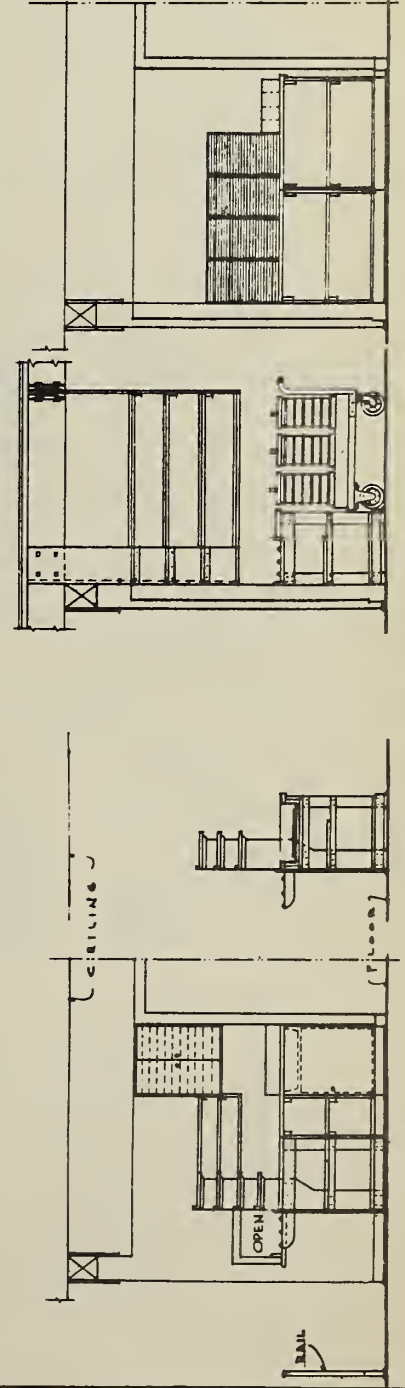


ELEVATION OF SERVING COUNTER

SCALE 0' 1' 2' 3' 4' 5' 6' 7' 8' 9' 10'



PLAN OF SERVING COUNTER



SECTION 1-1

SECTION 2-2

SECTION 3-3

ELEVATION 4

DRAWINGS ORIGINALLY PREPARED BY FWA.

SCALE 0' 1' 2' 3' 4' 5' 6' 7' 8' 9' 10'

INDUSTRIAL FEEDING FACILITIES MANUAL

STATIONARY FAST SERVICE UNIT

WITH SEATING 500.

WITH CAUTEN ON FIRST FLOOR.

SHEET No.

3.

- DETAILS -

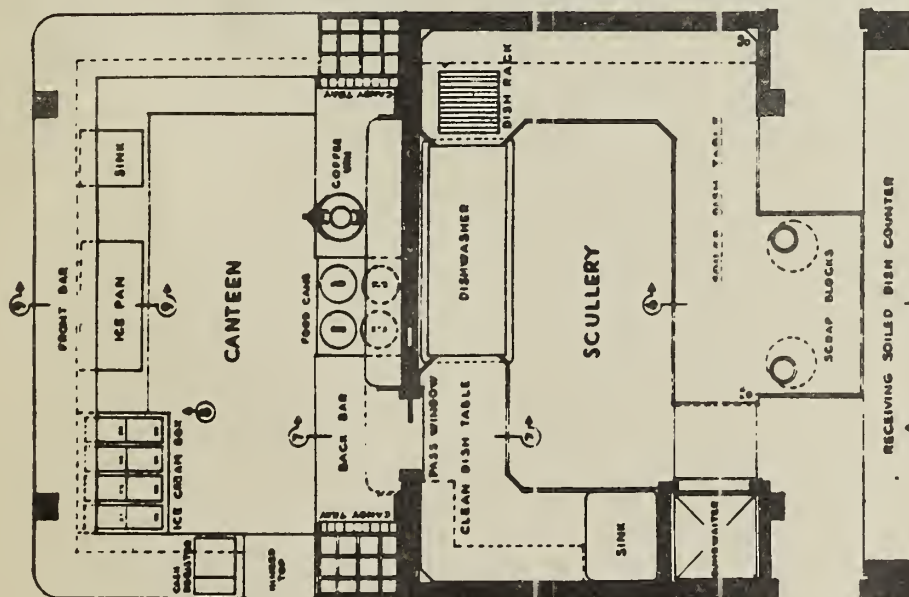
15 20 44

INDUSTRIAL FEEDING PROGRAMS DIVISION

CIVILIAN FOOD REQUIREMENTS BRANCH

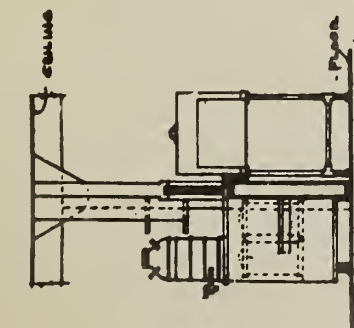
OFFICE OF DISTRIBUTION

WAR FOOD ADMINISTRATION

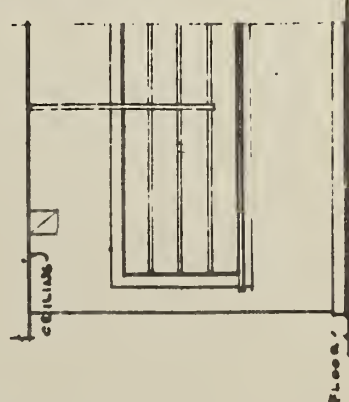


PLAN OF SCULLERY & CANTEEN

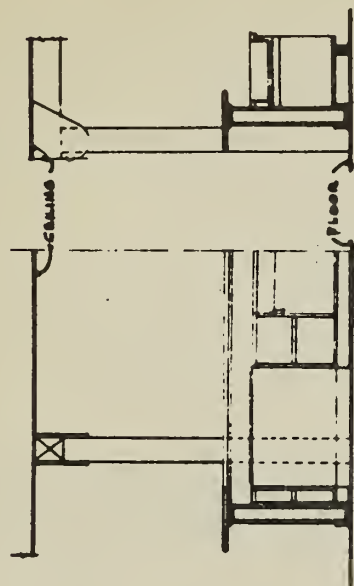
SCALE 0' 1' 2' 3' 4' 5' 6' 7' 8'



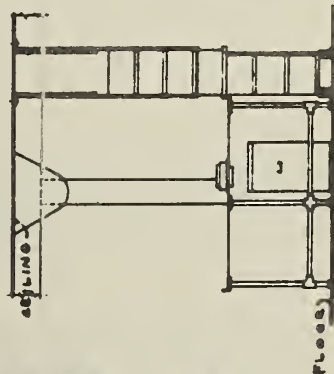
SECTION 7-7



ELEVATION 5



ELEVATION 8



SECTION 6-6

INDUSTRIAL FEEDING FACILITIES MANUAL	
STATIONARY FAST SERVICE UNIT	
SEATING-500.	
CANTEEN ON FIRST FLOOR.	
SERIES	TITLE OF SHEET
S.F.S.	DETAILS OF
05	SCULLERY & CANTEEN
INDUSTRIAL FEEDING PROGRAMS DIVISION	BRANCH
CIVILIAN FOOD REQUIREMENTS	OFFICE OF DISTRIBUTION
WAR FOOD ADMINISTRATION	

LUNCH STANDS

(Hot and cold food delivered from central kitchen
- no seating space)

Lunch stands are planned to serve a limited menu of hot and cold foods. Hot food is received from a central kitchen in insulated containers and served from the same containers. Cold food is pre-packaged.

Lunch stands serve an important function in industrial feeding because they can be used to supplement cafeteria service or may be used in small plants to serve a limited menu of nutritious foods.

STATIONARY CANTEEN

(Packaged hot and cold food delivered from commissary or central kitchen. Has facilities for storing hot and cold food. Has shelter.)

The stationary canteen serving only packaged foods should be used only when it is impossible to provide other more complete types of facilities. Its use may be determined by either of the following conditions: (1) where the type of work performed does not allow the worker to leave the building; (2) where small groups of workers are distributed over a large area.

Every effort should be made to separate the canteen from work areas in order to maintain effective sanitation. If the canteen is located outside a building, shelter should be provided. In both cases, comfortable seating facilities should be included.

MOBILE UNITS

(Mobile units are loaded at the commissary or central kitchen and are moved to designated places at scheduled periods, serving complete hot meals, sandwiches, and beverages; or one hot dish, sandwiches, and beverages)

Mobile food service can be used to best advantage in plants where small numbers of workers are scattered among widely dispersed work areas such as occur in large shipyards, where employee concentration fluctuates rapidly, where the lunch period or the type of operation does not allow sufficient time for workers to reach a stationary facility and return to the production areas, or where space cannot be made available for stationary facilities.

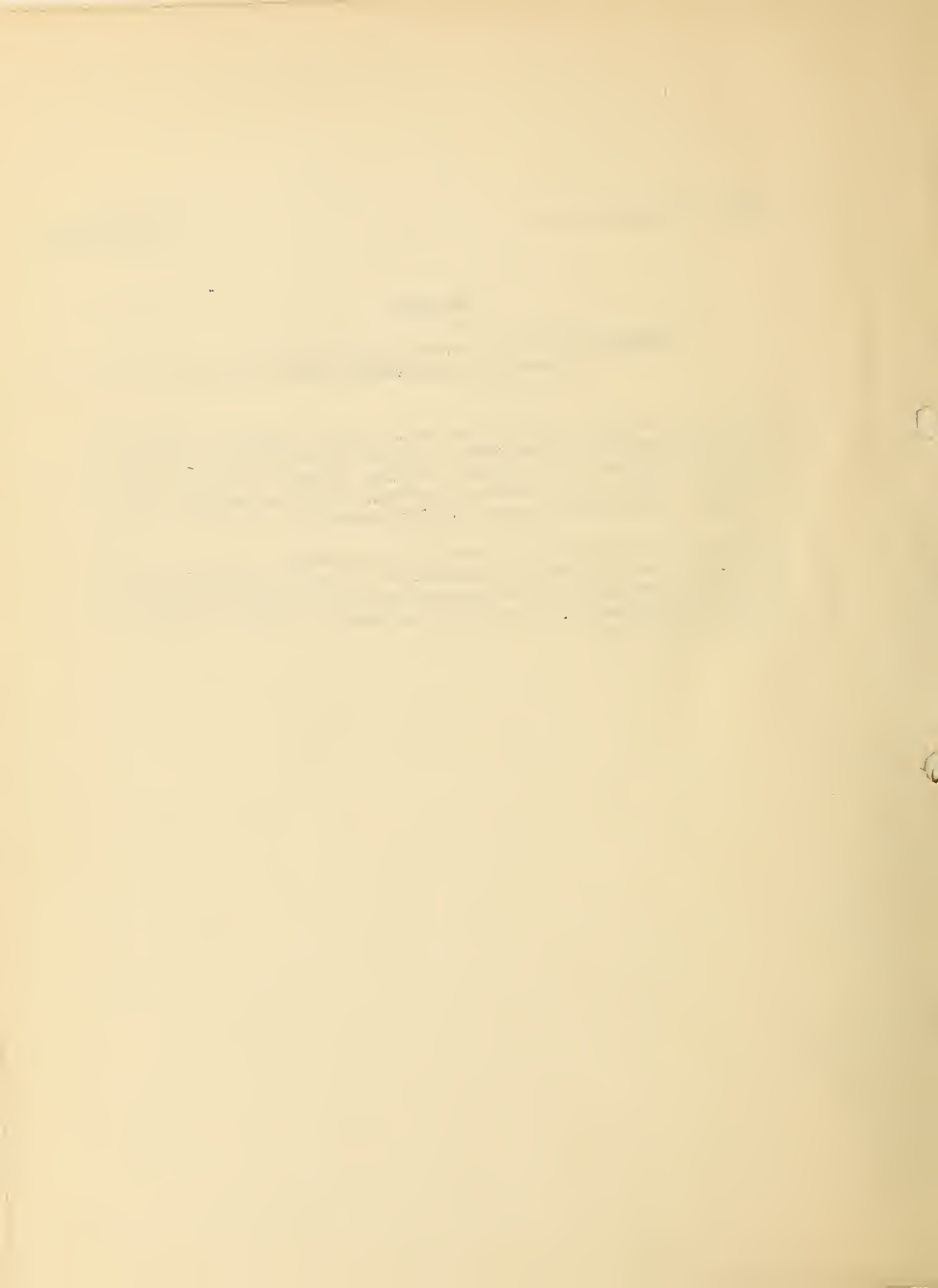
The disadvantages of the mobile unit are that food is served in working areas and usually no seating facilities are provided.

SHELTERS

(Shelters used in connection with mobile units,
canteens, lunch stands, etc.)

Shelters should be provided when mobile units, canteens, and lunch stands are located in the open. Unsheltered facilities offer only a partial solution to industrial feeding. Workers who must stand exposed to unfavorable weather conditions while eating cannot be expected to derive the maximum benefit from their lunches.

Shelters do not have to be expensive or permanent. They can be of a temporary and/or portable construction. Enclosed shelters offer the best accommodations. An open-air pavilion type with seating or stand-up arrangements for eating is acceptable under favorable weather conditions.



WFA
Office of Distribution

TECHNICAL SERVICES AVAILABLE

Industrial feeding specialists of the War Food Administration's Office of Distribution are prepared to assist with in-plant feeding problems, in the following ways:

Survey plants without food service and recommend suitable types of installations, assist with lay-outs, and suggest operating methods.

Survey plants with food services and give advice on methods for improving operating efficiency.

Advise and assist in organization of nutrition education programs for workers.

Certify to War Production Board the need for food service equipment and facilities.

Secure cooperation of Federal and local agencies concerned.

These services are available at no cost, on request by plant management. Requests should be addressed to the appropriate regional Office of Distribution, War Food Administration:

Northeast Region, 150 Broadway, New York 7, New York

Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia.

Southern Region, Western Union Building, Atlanta 3, Georgia.

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia.

Midwest Region, 5 South Wabash Avenue, Chicago 3, Illinois.

Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin.

Southwest Region, 425 Wilson Building, Dallas 1, Texas

Arkansas, Colorado, Kansas, Louisiana, New Mexico, Oklahoma, Texas.

Western Region, 821 Market Street, San Francisco 3, California.

Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming, Territory of Hawaii.



